

Ministry of Environment, Forest and Climate Change
Impact Assessment Division
(Industry-1 Sector)

Summary record of the twenty fifth (25th) meeting of Re-Constituted Expert Appraisal Committee (REAC) held during 25-27th November, 2020 for environment appraisal of Industry-1 sector projects constituted under the provisions of Environment Impact Assessment (EIA) notification, 2006.

The twenty fifth meeting of the Expert Appraisal Committee (EAC) for Industry-1 Sector constituted as per the provisions of the EIA Notification, 2006 for Environment Appraisal of Industry-1 Sector Projects was held during **25-27th November, 2020** in the Ministry of Environment, Forest and Climate Change (MoEF&CC) through **video conferencing** in view of the ongoing Corona Virus Disease (Covid-19) issue. The list of EAC attendees is as follows.

S.No.	Name	Position	25/11/20	26/11/20	27/11/20
1.	Dr. Chhavi Nath Pandey	Chairman	Present	Present	Present
2.	Dr. Bipin Prakash Thapliyal, Director, CPPRI.	Member	Absent	Absent	Absent
3.	Dr. Siddharth Singh, Scientist 'E' IMD.	Member	Present	Present	Present
4.	Dr. Jagdish Kishwan	Member	Present	Present	Present
5.	Dr. G.V. Subramanyam	Member	Present	Present	Present
6.	Dr. Tejaswini AnanthKumar	Member	Present	Present	Present
7.	Shri. Ashok Upadhyaya	Member	Present	Present	Present
8.	Shri. Rajendra Prasad Sharma	Member	Present	Present	Present
9.	Dr. Sanjay Deshmukh	Member	Absent	Absent	Absent
10.	Prof. S.K. Singh	Member	Present	Present	Present
11.	Dr. R. Gopichandran	Member	Absent	Absent	Absent
12.	Shri Jagannadha Rao Avasarala	Member	Present	Present	Present
13.	Shri. J.S.Kamyotra	Member	Present	Present	Present
14.	Shri. A.K. Agrawal	Member Secretary	Present	Present	Present

After welcoming the Committee Members, discussion on each of the agenda items was taken up. The minutes of 24th meeting held during 27-29th October, 2020 were confirmed by the EAC as already uploaded on PARIVESH.

25th November, 2020

- 25.1 Setting up of 6 MTPA Integrated Steel Plant and 500 MW of Captive Power Plant by **M/s. Uttam Galva Ferrous Limited** located at Kuduthini and nearby Villages, Taluka & **District Bellary, Karnataka**. [Online Proposal No. IA/KA/IND/180641/2014; File No. J-11011/80/2014-IA-II(I)] – **Environment Clearance – regarding**.
- 25.1.1 The project proponent vide their email dated 19/11/2020 expressed their inability to attend the meeting as their company Director who was supposed to present the case before the EAC is suffering from Covid-19 and under treatment presently. In view of this, PP has requested to consider their proposal in the next EAC meeting.
- 25.1.2 In this regard, the Member Secretary apprised the EAC that as per MoEF&CC Office Memorandum No. 22-35/2020-IA.III dated 18/11/2020 pertaining to “Streamlining the process of grant of Environment Clearance process”, “All projects, placed in the agenda, should be considered by the EAC notwithstanding the non-attendance of the Project Proponent or his consultant in the EAC meeting to make a presentation. A clarification may however be sought from the consultant regarding reason for not attending the meeting”.
- 25.1.3 In response to the above, EAC noted that as per the provisions of the EIA Notification, 2006 which states that “Expert Appraisal Committee concerned in a transparent manner in a proceeding to which the applicant shall be invited for furnishing necessary clarifications in person or through an authorized representative”. In this regard, after deliberations, the EAC is of the considered view that participation of applicant in person (or) authorized representative in the meeting is very much essential due to facilitate the following:
- To conduct the meetings in a transparent manner.
 - To get consent of the project proponent while prescribing the conditions for which the proposal is considered by the EAC.
 - To clarify the technical queries/concerns of EAC which might emerge during the appraisal process.
- 25.1.4 In view of above, the Committee decided to consider the proposal in the presence of PP. Further, the project proponent vide his email dated 19/11/2020 has requested to consider the proposal in the next meeting. The Committee felt the Project Proponent’s request needs consideration and recommended to consider the proposal in the next EAC meeting as requested by the PP.
- 25.2 Expansion of Integrated Steel Plant from 6 to 8 MTPA Crude Steel and 9 MTPA Finished Steel by **M/s. Tata Steel Limited** located at Kalinganagar Industrial Complex, Duburi, **District Jajpur, Odisha** - [Online Proposal No. IA/OR/IND/128148/2016, File No. J-11011/7/2006-IA-II(I)] – **Reconsideration for grant of Environment Clearance based on ADS reply Environment Clearance – regarding**.
- 25.2.1 The salient features of the proposal cited above is given as below:

Details submitted by the project proponent

The detail of the ToR is furnished as below:

Date of application	Consideration	Details	Date of accord
21/09/2016	12 th meeting held on 27 th - 28 th October, 2016	Terms of Reference	14/03/2017

As per the amendment to the EIA Notification, 2006 issued vide S.O. 751(E) dated 17/02/2020, the Terms of Reference for the projects or activities issued by the regulatory authority concerned, shall have the validity of four years from the date of issue. Accordingly, the validity of the aforesaid ToR is till 13/03/2021.

The project of M/s Tata Steel Limited at Kalinganagar located in Duburi Village, Sukinda Tehsil, Jajpur District, Odisha is for enhancement of production of crude steel from six (6) MTPA to eight (8) MTPA and nine (9) MTPA finished steel.

The existing project was accorded environmental clearance vide Ir.no. J/11011/7/2006 -IA. II (I) dated 07/11/2006 under the provisions of the EIA Notification, 2006. Following EC amendments and validity extension of EC was obtained from MoEF&CC subsequent to the grant of EC dated 7/11/2016.

S.No.	Date of letter	Details
i.	10/10/2012	Amendment in the EC dated 7/11/2006 was accorded for change in configuration of blast furnace/coke oven battery/lime calcining plant/captive power plant, conversion of 2 nos of sinter plant into 1 no of sinter plant & 1 no. of pellet plant and addition of Cold Roll Mill.
ii.	13/05/2015	Amendment in the EC dated 7/11/2006 was accorded for (i) installation of 24x7 air and water monitoring devices to monitor the air emission and effluent discharge; (ii) Use of wet quenching till the CDQ is stabilized by June, 2016 and thereafter maintain wet quenching as standby; (iii) Use of LDO for generation of power in power plant and DG sets till the Blast furnace gas is available and thereafter maintain LDO as standby.
iii.	13/05/2015	The validity period of the EC was extended till 6/11/2016.
iv.	20/12/2016	Amendment in the EC dated 7/11/2006 was accorded for using wet quenching till the CDQ is stabilized by November, 2016 and thereafter maintain wet quenching as standby.

It has been reported that the Consent to Operate from the State Pollution Control Board, Odisha was obtained vide Lr. No. 3938/IND-I-CON-6447 dated 27/03/2020 and consent is valid up to 31/03/2021

The existing and proposed expansion unit details are given as below

S. No.	Production Facilities	6.0 MTPA as per existing EC		Final Configuration at 8 MTPA Crude Steel & 9 MTPA Finished Steel
		Phase 1 (Operational)	Phase 2 (Balance)	
1.	Coke Ovens & By products Recovery Plant	2 X 88 ovens, 5 m tall	2 X 88 ovens, 5 m tall	<ul style="list-style-type: none"> • 2 X 88 ovens, 5 m tall • 3 X 62 ovens, 6.25 m tall
2.	Sinter/Pellet Plant	1 No. Sinter Plant (496 m ²)	1 No. Pellet Plant	<ul style="list-style-type: none"> • 1 no. Sinter Plant (496m²) • 1 no. Pellet Plant (744m²)

S. No.	Production Facilities	6.0 MTPA as per existing EC		Final Configuration at 8 MTPA Crude Steel & 9 MTPA Finished Steel
		Phase 1 (Operational)	Phase 2 (Balance)	
3.	Blast Furnace	1 No x 4300 m ³	1 No x 4300 m ³	<ul style="list-style-type: none"> Two BF (1x4330m³ & 1x5870m³)
4.	Lime Calcining Plant	2 x 600 TPD Vertical Shaft Kiln	1 x 600 TPD Vertical shaft kiln	<ul style="list-style-type: none"> 4 x 600 TPD vertical shaft kiln
5.	Steel Melt Shop (SMS)	2x300 Nos. of Convertors 1x310 t CAS-OB, 1X twin Strand Slab caster	6.0 MTPA 1 x 300 t Converter 1x 310 t twin RH, 1X twin Strand Slab caster	<u>8.1 MTPA Crude Steel</u> <ul style="list-style-type: none"> 3 x 310 t BOF converters 1 x 310 t CAS-OB 1 x 310 t twin RH 2 x 310 tons LF 2 x twin Strand Slab caster 1 Multi Strand Billet Caster
6.	Mills	Hot Strip Mill 1 X 5.5 MTPA	Cold Rolling 1 X 2.2 MTPA	<ul style="list-style-type: none"> Hot Strip -1 No. 7 MTPA Cold Rolling- 1 No. 2.2 MTPA LP Mill – 2.0 MTPA
7.	Captive Power Plant	2 x 67.5 MW by-product gas based	1 X 67.5 MW by product gas based	<ul style="list-style-type: none"> 3 x 67.5 MW by product gas based 1 x 67.5 MW by product gas cum coal tar firing

The total land required for the project is 1250 ha (This is part of 1405 ha available as part of MOU with Govt of Odisha). This is industrial land and presently utilized by project proponent. No forestland is involved. The entire land has been acquired for the project and is in possession of proponent. It has been reported that no water body exists around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

The topography of the area is moderately undulating and reported to lie between 85° 59'43" to 86° 02'39" N Latitude and 20° 56'55" to 20° 58'53" E Longitude in Survey of India topo sheet Nos. F45T13, F45O4, F45N16 & F45U1 at an elevation of 120 m AMSL. The ground water table reported to ranges between 0.92 to 4.58 m below the land surface during the post-monsoon season and 3.05 – 8.38 m below the land surface during the pre-monsoon season. Further, the stage of groundwater development is reported to be around 27.48% in core zone and 27.48% & 33.82% in the buffer zone and thereby these are designated as safe area.

No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to for corridor for Schedule-I fauna.

The targeted production capacity of the Integrated Steel Plant is 8 MTPA crude steel and 9 MTPA finished steel. The ore for the plant would be procured from own mines, imported and multiple domestic sources (open market). The ore transportation will be done through Rail with 5% road transport for exigencies.

The raw material requirement for the proposed project is given as below:

S.No.	Incoming raw materials / additives	Annual consumption MT	Source	Mode of transport	Distance of source from project site, km
1	Iron Ore (Fines)	12.13	Own Mines/Import/ Multiple domestic Source	Rail- 100%(exigency 5% by Road)	400
2	Coking Coal	5	Import/Own Mines/Multiple domestic Source	Rail- 100%(exigency 5% by Road)	600
3	Lump Ore/External Pellet	1.5	Domestic	Rail- 100%(exigency 5% by Road)	400
4	Anthracite	0.1	Import/Multiple domestic Source	Rail- 100%(exigency 5% by Road)	300
5	PCI Coal	1.6	Own Mines/Import/ Multiple domestic Source	Rail- 100%(exigency 5% by Road)	600
6	Limestone	2.41	Import/Multiple domestic Source	Rail- 100%(exigency 5% Road)	300
7	Bentonite	0.056	Import/Multiple domestic Source	Rail- 100%(exigency 5% Road)	300
8	Pyroxenite / Olivine/ Quartzite	0.351	Import/Multiple domestic Source	Rail 50%	300
9	Ferro Alloys	0.06	Import/Multiple domestic Source	Road-100%	300
10	DRI	0.432	Multiple domestic source	Rail- 100%(exigency 10 % by road)	300
11	Scrap	0.1	Multiple domestic source	Rail 50% & Road 50 %	300

The water requirement of the project is estimated at 112,704 m³/day, which will be obtained from Kharsua river. The permission for drawl of surface water is obtained from Dept. of Water resources, Govt. of Odisha vide Lr. No. 24977/WR dated 7/11/2019.

The power requirement of the project is estimated as 664 MW, out of which 270 MW will be obtained from captive power plant, 44 MW from CDQ, 51 MW from BF TRT, 220 MW from Grid and balance through open market.

Baseline Environmental Studies

Period	22/12/2016 to 27/03/2017
AAQ parameters at 8 locations	PM _{2.5} = 36.1 to 67.2 µg/m ³ PM ₁₀ = 66.6 to 105.5 µg/m ³ SO ₂ = 5.2 to 25.4 µg/m ³ NOx = 22.1 to 40 µg/m ³
AAQ modelling	PM ₁₀ = 1 µg/m ³ SO ₂ = 0.5 µg/m ³ NOx = 3.4 µg/m ³
Ground water quality at 8 locations	pH: 6.16 to 7.08, Total Hardness: 110 to 370.67 mg/l, Chlorides: 18.64 to 139.31 mg/l, Fluoride 0.1 mg/l. Heavy metals are within the limits
Surface water quality at 8 locations	pH: 7.1 to 7.2; DO: 5.4 to 6.2 mg/l and BOD: 3 to 10.3 mg/l. COD from 9.6 to 37.8 mg/l.
Noise levels	7.5 to 73.3 dBA for daytime and 38.0 to 67.4 dBA for night time.

It has been reported that a total of 40,88,800 tons per year of waste will be generated due to the project, which will be reused in process or sold to external agency. Hazardous waste like chrome sludge would be transferred to HWTSDf for safe disposal. The details of the solid waste generation and its utilization is given as below:

Solid wastes	Indicative composition (% w/w)	Expected generation (TPD)	Re-utilisation Measures
BF Slag	Granular solid Fe ₂ O ₃ - 10-15 CaO= 25-28 Al ₂ O ₃ =10-15 SiO ₂ = 30-35 MgO- 5-8	5,000-6,500	Abt. 95% would be granulated and sold to cement manufacturers; balance 5% as dry slag would be used for land reclamation and road construction. The MoU for sale of BF slag is given in Appendix 2 -5
Steelmaking Slag (BOF & LF)	Lumps Fe ₂ O ₃ - 30-33 CaO= 45-50 SiO ₂ = 10-15 MgO- 2-5	3,500-3,650	20% of the metallics in the slag would be recovered and reused in BOF. A portion of non-metallic part would be used as flux in sinter plant & in soil conditioning. Balance would be utilised as railway ballast, concrete, road making etc. after proper weathering
DE Systems and BF Flue dusts, sludges	Fine dusts Fe (T)= 35-40 CaO= 5- 6 C= 30-40 SiO ₂ =8-10	450-500	Recycling in sinter plant

Solid wastes	Indicative composition (% w/w)	Expected generation (TPD)	Re-utilisation Measures
Mill Scales/ Sludge	Solid flakes Fe (T) = 72-75 Oil= 8-10 SiO ₂ <0. 5 Mn O <0. 5	1,000 - 1, 100	100% utilisation within the plant
Scrap		1,150-1,200	100% reuse within the plant
Mill Scrap		600-620	100% reuse within the plant
Lime fines		400-450	100% reuse within the plant
Coal tar sludge & BOD sludge		280-300	Recycled back in Coke ovens
Chrome sludge		0.01 - 0.014	Transferred to authorized agency

It has been envisaged that an area of 464 ha will be developed as green belt (including existing greenbelt) around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

The Public hearing of the project was held on 25/10/2019 at JDCL Complex, Pankapal under the chairmanship of ADM (Kalinganagar, Jajpur). The issues raised during public hearing are local employment, health, drinking water, periphery development, training, plantation and environment protection. An amount of 42.75 Crore (0.2 % of Project cost) has been earmarked based on public hearing issues and needs assessment.

The capital cost of the project is Rs 21000 Crores and the capital cost for environmental protection measures is proposed as Rs 2620 crore. The annual recurring cost towards the environmental protection measures is proposed as Rs 50 crore. The detailed CER plan has been provided in the EIA Report (June 2020) in its page No. 7-187 to 7-188. The employment generation from the proposed project is 19000.

Greenbelt will be developed in 464 ha in around plant area which is about 33% of the total plant area, including existing greenbelt (365 ha). Local and native species will be planted with a density of 1600 trees per hectare. Total no. of 160,000 saplings will be planted and nurtured in 99 hectares in 5 years.

The proponent has mentioned that there is no court case under EIA Notification to the project or related activity.

EIA Consultant engaged for the EIA-EMP Report is M/s M. N. Dastur & Co. (P) Ltd. (Accredited EIA Consultant Organizations).

Compliance Status of existing EC conditions from Regional Office, Bhubaneswar

The status of compliance of existing EC was obtained from Regional Office, Bhubaneswar vide Lr. No. 101/208/06/EPE, dated 10/12/2019 wherein observations have been made with respect to usage of excess water, discharge of water outside the plant premises and drains at raw material storage yard is filled with silt. The project proponent has submitted the action taken report to RO

on 6/01/2020 and subsequently RO issued a report on 04/02/2020 stating that surface water withdrawal is within the permissible quantity and study has been commissioned by proponent for improvement in surface run-off management. Further, corrective action has been taken by proponent for de-siltation of drains at raw material storage yard.

25.2.2 M/s. Tata Steel Limited has made an online application vide proposal no. IA/OR/IND/128148/2016 dated 13/06/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the project is appraised at the Central level.

25.2.3 The aforesaid proposal was considered in the 20th EAC meeting held on 25-26th June, 2020.

Proceedings of the EAC meeting held on 25-26th June, 2020

The project proponent originally submitted the application for EC for the project cited above through PARIVESH on 19/12/2019. Subsequently, Essential Details were sought by the Ministry on 8/01/2020. In response to this, project proponent resubmitted their application on 13/06/2020 along with essential details sought by the Ministry.

Before considering the instant expansion proposal under consideration, the EAC asked the representatives of M/s. Tata Steel Limited and their EIA consultant namely M/s. M. N. Dastur & Co. (P) Limited to present on the existing EC granted and its implementation status as the project proponent has stated in their records submitted to the Ministry that some construction activities are still ongoing at the project site.

In this regard, the details furnished by the project proponent are summarized as below

- A. The existing project of M/s Tata Steel Limited for setting up of 6 MTPA Integrated Steel Plant located at Kalinganagar located in Duburi Village, Sukinda Tehsil, Jajpur District, Odisha was originally accorded EC vide letter no. J/11011/7/2006 – IA.II (I) dated 07/11/2006 under the provisions of the EIA Notification, 2006
- B. The project proponent intended to execute the 6 MTPA Integrated Steel Plant in two phases.
- C. Following EC amendments and validity extension of EC was obtained from MoEF&CC subsequent to the grant of EC dated 7/11/2016

S.No.	Date of	Details
i.	10/10/2012	Amendment in the EC dated 7/11/2006 was accorded for change in configuration of blast furnace/coke oven battery/lime calcining plant/captive power plant, conversion of 2 nos of sinter plant into 1 no of sinter plant & 1 no. of pellet plant and addition of Cold Roll Mill.

S.No.	Date of	Details
ii.	13/05/2015	Amendment in the EC dated 7/11/2006 was accorded for (i) installation of 24x7 air and water monitoring devices to monitor the air emission and effluent discharge; (ii) Use of wet quenching till the CDQ is stabilized by June, 2016 and thereafter maintain wet quenching as standby; (iii) Use of LDO for generation of power in power plant and DG sets till the Blast furnace gas is available and thereafter maintain LDO as standby.
iii.	13/05/2015	The validity period of the EC was extended till 6/11/2016.
iv.	20/12/2016	Amendment in the EC dated 7/11/2006 was accorded for using wet quenching till the CDQ is stabilized by November, 2016 and thereafter maintain wet quenching as standby.

D. The units along with the production capacity envisaged in the EC dated 7/11/2006 and its subsequent amendments is given as below:

Sl.	Production Facilities	6.0 MTPA as per existing EC	
		Phase 1	Phase 2
1	Coke Ovens & Byproducts	2 X 88 ovens, 5 m tall	2 X 88 ovens, 5 m tall
2	Sinter/Pellet Plant	1 No. Sinter Plant (496	1 No. Pellet Plant
3	Blast Furnace	1 No x 4300 m ³	1 No x 4300 m ³
4	Lime Calcining Plant (LCP)	2 x 600 TPD Vertical Shaft Kiln	1 x 600 TPD vertical shaft kiln
5	Steel Melt Shop (SMS)	2x300 Nos. of Convertors 1x310 t CAS-OB, 1X twin Strand Slab caster	1 x 300 t Converter 1x 310 t twin RH, 1X twin Strand Slab caster
6	Mills	Hot Strip Mill 5.5 MTPA-1 No	Cold Rolling- 1 No 2.2 MTPA
7	Captive Power Plant	2 x 67.5 MW by product gas based	1 X 67.5 MW by product gas based

E. Project proponent has started commercial production in June 2016 based on completion of Phase 1 facilities, planned as part of 6 MTPA Crude Steel Plant. Phase 2 of 6 MTPA crude steel capacity is under implementation.

F. Since the Phase 2 of 6 MTPA crude steel capacity was under implementation and further intended to expand the ISP capacity, project proponent submitted an online application vide proposal no. IA/OR/IND/53158/2016 dated 21/09/2016 seeking the following:

- i. Extension of the validity of the existing EC dated 7/11/2006 so that construction of auxiliary and balance facilities can continue and
- ii. Prescribed ToR for the expansion to 8 MTPA crude steel capacity.

G. The aforementioned proposal was considered in the 12th meeting of EAC held on 27-28th October, 2016 and the EAC has recommended for grant of ToR for the following unimplemented portion of the work along with the proposed expansion. Accordingly, the ToR was accorded by the Ministry on 14/03/2017

S. No.	Production Facilities	6.0 MTPA as per existing EC		Final Configuration at 8 MTPA Crude Steel & 9 MTPA Finished Steel
		Phase 1 (Operational)	Phase 2 (Balance)	
1.	Coke Ovens & By products Recovery Plant	2 X 88 ovens, 5 m tall	2 X 88 ovens, 5 m tall	<ul style="list-style-type: none"> • 2 X 88 ovens, 5 m tall • 3 X 62 ovens, 6.25 m tall
2.	Sinter/Pellet Plant	1 No. Sinter Plant (496 m ²)	1 No. Pellet Plant	<ul style="list-style-type: none"> • 1 no. Sinter Plant (496m²) • 1 no. Pellet Plant (744m²)
3.	Blast Furnace	1 No x 4300 m ³	1 No x 4300 m ³	<ul style="list-style-type: none"> • Two BF (1x4330m³ & 1x5870m³)
4.	Lime Calcining Plant	2 x 600 TPD Vertical Shaft Kiln	1 x 600 TPD Vertical shaft kiln	<ul style="list-style-type: none"> • 4 x 600 TPD • vertical shaft kiln
5.	Steel Melt Shop (SMS)	2x300 Nos. of Convertors 1x310 t CAS-OB, 1X twin Strand Slab caster	6.0 MTPA 1 x 300 t Converter 1x 310 t twin RH, 1X twin Strand Slab caster	8.0 MTPA Crude Steel <ul style="list-style-type: none"> • 3 x 310 t BOF converters • 1 x 310 t CAS-OB • 1 x 310 t twin RH • 2 x 310 tons LF • 2 x twin Strand Slab caster • 1 Multi Strand Billet Caster
6.	Mills	Hot Strip Mill 1 X 5.5 MTPA	Cold Rolling 1 X 2.2 MTPA	<ul style="list-style-type: none"> • Hot Strip -1 No. 7 MTPA • Cold Rolling- 1 No. 2.2 MTPA • LP Mill – 2.0 MTPA
7.	Captive Power Plant	2 x 67.5 MW by-product gas based	1 X 67.5 MW by product gas based	<ul style="list-style-type: none"> • 3 x 67.5 MW by product gas based • 1 x 67.5 MW by product gas cum coal tar firing

H. The project proponent has gone ahead with the unimplemented portion of the work i.e., construction of Phase 2 of 6 MTPA crude steel capacity beyond the validity period of the EC dated 7/11/2006 i.e., 6/11/2016 which was also a part of the ToR dated 14/03/2017. Presently the construction of various facilities like CRM, Pellet Plant, Blast Furnace and Coke Plant is underway. The present status of construction is given in the chapter 2 of the EIA report and also furnished as below

Sl.	Production Facilities	Phase 2	Ongoing construction activities at site at present for balance facilities
1.	Pellet Plant	1 No. Pellet Plant	Area development, foundation and erection in progress.
2.	Blast Furnace	1 No x 4300 m ³	Area development, foundation and erection in progress.
3.	LD Converter	1 x 300 Ton	All facilities are already constructed. Only converter needs to be erected.
4.	CRM	2.2 MTPA	Foundation and erection in progress.
5.	Lime Calcining Plant (LCP)	1 x 600 TPD vertical shaft kiln	Area development in Progress.

- I. The project proponent claimed during the discussion that they have gone ahead with the construction of Phase 2 of 6 MTPA crude steel capacity beyond the validity period of the EC dated 7/11/2006 i.e., 6/11/2016 based on the preamble stated in the EC amendment letter dated 26/12/2016 and the ToR letter dated 14/03/2017 issued by MoEF&CC.
- J. The project proponent has requested the EAC to consider the issue in totality and take an appropriate view in the matter.

Besides above, the EAC has gone through the following records:

A. Compliance Status of existing EC from Regional Office, Bhubaneswar

The status of compliance of existing EC was obtained from Regional Office, Bhubaneswar vide Lr. No. 101/208/06/EPE, dated 10/12/2019 wherein it is stated that project proponent is in the process of installation of pellet plant and blast furnace.

B. Public representation

The EAC has taken cognizance of the issues raised in the public representation dated 13/11/2019 of Shri.R.Jarika alleging several shortcomings in the aforesaid public hearing inter-alia including non-availability of EIA report for perusal, inadequate publicity of public hearing and non-addressal of queries raised during the hearing by the public etc.,.

C. Report of District Magistrate and the RO factual report on public representation

As per the District Magistrate report dated 5/02/2020, the public hearing for the instant project was conducted on 25/10/2019 as per the procedure laid down in the EIA Notification, 2006. Further, noted from the report that reasonable opportunity was given to the public to express their views and suggestions during the hearing held on 25/10/2019 and no public was prevented to participate in the said hearing. As per the RO factual report dated 18/06/2020, the foundation/RCC construction activities were in progress for the pellet plant and blast furnace. In this regard, the photographs are also submitted.

Observations of the Committee meeting held on 25-26th June 2020

The Committee noted the following:

- i. It is an established fact from the records submitted by the proponent and report of the Regional Office that project proponent has gone ahead with the construction of

Phase 2 of 6 MTPA crude steel capacity beyond the validity period of the EC dated 7/11/2006 i.e., 6/11/2016 which was also a part of the ToR dated 14/03/2017 without obtaining prior Environment Clearance as mandated under the provisions of EIA Notification, 2006. Thus, proponent has violated the provisions of the EIA Notification, 2006.

- ii. Claim of the project proponent regarding mentioning of phase 2 facilities under implementation in the EC amendment letter dated 20/12/2016 and the ToR letter dated 14/03/2017 are untenable for going ahead with construction of phase 2 facilities.
- iii. As per the Ministry's notification S.O. 804 (E) dated 14/03/2017, the projects or activities requiring prior Environment Clearance (EC) under EIA Notification, 2006 from the concerned Regulatory Authority are brought for EC after starting the construction work, or have undertaken expansion, modernization, and change in product- mix without prior environmental clearance, these projects shall be treated as cases of violations. Further, the projects or activities which are in violation as on date of this notification only will be eligible to apply for EC under this notification
- iv. As per the Ministry's O.M. dated 9/9/2019, proposals involving violation can be considered as per the notification no. S.O. 804 (E) dated 14/03/2017 only, if it is applied during the window period 14/03/2017 to 13/09/2017 and 14/03/2018 to 13/04/2018 (or) prior to the violation window period. These proposals were termed as "lateral entry proposals" and considered as per the provisions laid down in the Notification dated 14/03/2017.
- v. In the instant proposal under consideration, application for ToR was made on 21/09/2016 which was prior to the violation window period. Hence, this proposal can be referred to EAC – Violation through lateral entry basis for appropriate consideration as per the provisions laid down in S.O. 804 (E) dated 14/03/2017.

Recommendations of the Committee meeting held on 25-26th June 2020

In view of the foregoing, the Committee after deliberations recommended to laterally refer the proposal to EAC – Violation Sector in accordance with the MoEF&CC O.M. dated 9/9/2019 as the application for ToR was made on 21/09/2016 which was prior to the violation window period

25.2.4 Based on the EAC recommendations, the file was processed wherein the Competent Authority of MoEF&CC observed that the instant case is beyond the applicability of S.O. 804 (e) dated 14/03/2017 and directed to adopt the following principle in all cases where violation is suspected or alleged.

- i. Send the matter to the Sector EAC for consideration of the case on merit.
- ii. Take action against the alleged violation as per law.
- iii. Do not wait for either the evidence of action having been started or violation proceedings to finish before taking up the case on merit.
- iv. The EC if given after consideration on merit would be valid from the date it is given and not with retrospective effect. For the period before it, if violation is established by the court or the competent authority, the punishment/penalty as per law would be imposed.

25.2.5 In pursuance to the aforesaid directions of the Competent Authority, the proposal was placed before the EAC in its 22nd meeting held on 27/08/2020 for considering the instant expansion proposal on merit. Accordingly, the proposal was considered by EAC on merit.

Observations of the Committee during meeting held on 26 – 28th August, 2020

The Committee noted the following:

- i. Taken cognizance of the issues raised in the public representation and observed that as per the District Magistrate report public hearing for the instant project was conducted on 25/10/2019 as per the procedure laid down in the EIA Notification, 2006. Further, noted from the report that reasonable opportunity was given to the public to express their views and suggestions during the hearing held on 25/10/2019 and no public was prevented to participate in the said hearing. The committee was satisfied with the DM reply.
- ii. Public hearing proceedings highlighting both positive and negative feedback from stakeholders along with PPs response has not been furnished.
- iii. The committee noted that baseline data collected by the project proponent is already more than three years and needs to be revalidated as several developmental activities has took place in that area in the last four years. The AAQ parameters relevant to the project activity such as Benzo- α -Pyrene, and VOC has not been monitored.
- iv. Action plan for maintaining ZLD for the existing and proposed expansion has not been furnished.
- v. Scheme for, control of Dioxins/Furan emissions from sinter plants, charging and pushing emissions from Coke Ovens and mercury emissions from power plans has not been furnished

Recommendations of the Committee during meeting held on 26 – 28th August, 2020

In view of the foregoing and after deliberations, the Committee deferred the consideration of the proposal cited above and sought the following additional information

- i. Summary of the public hearing proceedings highlighting both positive and negative feedback from stakeholders along with PPs response for both.
- ii. Revalidate the base line data by monitoring the physical environment (Air, water, soil and Noise) for of one month starting 15/09/2020. All 12 parameters shall be monitored in Ambient Air as per MoEF&CC requirements.
- iii. AAQ modelling shall be done based on worst case scenario.
- iv. Risk Assessment shall be carried out based on QRA for the existing plant.
- v. Please Submit the EMP Matrix indicating; EMP details, Time line for implementation; Budgetary Provisions and Monitoring Schedule and monitoring methodology.
- vi. Actions initiated to achieve ZLD in existing plant and post implementation of the expansion proposal.
- vii. Additional plantation scheme in the vacant land to increase greenery and to control fugitive emissions as the PM₁₀ and PM_{2.5} levels in the study area are higher than the NAAQ norms. 2500 trees shall be planted per ha.

- viii. Scheme for upgradation of Pollution control systems to achieve less than 30 mg/Nm³ particulate matter emissions. Further, the estimated reduction in pollution load shall be furnished as the CEPI score for the area is 49.62.
- ix. CER table based on PH proceedings and SIA conducted shall be furnished. CER expenditure as per capex indicated in EIA shall be Rs 56.5 Cr and CER activities shall be completed in 4 years.
- x. Scheme for, control of Dioxins/Furan emissions from sinter plants, charging and pushing emissions from Coke Ovens and mercury emissions from power plans.
- xi. The data acquired through CEMS, shall be used for control of processes in order to control the stack emissions. This should include the MIS for closing the non-conformity loop.
- xii. Confirmation is sought on the following points:
 - PP shall install a state-of-the-art Waste Recycling Plant (WRP) to process various types of slags and wastes generated in the plant to recover and recycle metallics, fluxes, aggregates and boulders.
 - PP shall use SMS Slag as soil conditioner in watershed management area to supplement micro nutrients.
 - PP shall recover and recycle unburnt carbon from BF flue dust and GCP sludge.
 - PP shall use steam and CO₂ to age and fix the SMS slag for use as concrete for road making.
 - Confirmation that PP shall practice 100 percent waste utilization.
- xiii. Scheme for improvement in drainage pattern of the plant area.
- xiv. Details of health center proposed including skin care for employees and neighboring community.
- xv. Power saving by implementation of Slip Power Recovery System (SPRS) for the large motors shall be practiced in the plant.
- xvi. PP shall provide details of specific water and power consumption details pre and post operation.

In addition to the above, the Committee also recommended that the Ministry may take action against the M/s. Tata Steel Limited for carrying out the construction activities beyond the expiry of the validity of the EC by sending a letter to State Government of Jharkhand with a request to initiate legal action against PP under section 15 read with section 19 of the Environment (Protection) Act, 1986. Further, PP may also be directed to stop the ongoing construction activities till the EC is obtained from MoEF&CC.

25.2.6 Project proponent has submitted the reply to the above ADS on 11/11/2020 and the same was placed before the EAC in its meeting held on 25-27th November, 2020. The reply given by the PP are summarized as below:

- i. ***Summary of the public hearing proceedings highlighting both positive and negative feedback from stakeholders along with PPs response for both.***

Reply: Summary of Public Hearing proceedings highlighting positive and negative feedback from stakeholders along with PP's response has been submitted.

- ii. ***Revalidate the base line data by monitoring the physical environment (Air, water, soil and Noise) for of one month starting 15/09/2020. All 12 parameters shall be monitored in Ambient Air as per MoEF&CC requirements.***

Reply: PP has submitted the revalidated baseline data during Sept'20 - Oct'20 monitored for all the 12 ambient air quality parameters and the compared with the previously collected data. PP has stated that Comparing the air quality data collected in 2016-2017 with the recently monitored data, it is evident that both average and P₉₈ values of PM₁₀ and PM_{2.5} have reduced significantly in 2020. Monitored values of SO₂ and NO_x have varied marginally when compared between the two time periods. PP has also submitted the data for ground water and surface water showing variations in water quality in 2017 and 2020. PP has further submitted the Soil Quality monitored at 3 sites and noise quality monitored at 7 locations including Industrial, Commercial and Silence Zone.

- iii. ***AAQ modelling shall be done based on worst case scenario.***

Reply: The project proponent has submitted the AAQ modelling for worst case scenario. The figures depict the GLCs of PM₁₀, SO₂ and NO_x plotted in BREEZE AERMOD ISC Software for normal and worst case meteorological conditions. An additional worst case has been modelled for PM in the event of failure of APCs of major plant units.

- iv. ***Risk Assessment shall be carried out based on QRA for the existing plant.***

Reply: PP has submitted that QRA based risk assessment has been carried out for the existing plant. Accordingly, PP has submitted Risk Assessment report with mitigative measure for the potential risks.

- v. ***Please Submit the EMP Matrix indicating; EMP details, Time line for implementation; Budgetary Provisions and Monitoring Schedule and monitoring methodology.***

Reply: EMP Matrix along with EMP details, timeline, budgetary provision and monitoring schedule is submitted by PP. PP has further earmarked a budget of Rs. 2677 Crores towards implementation of EMP for proposed project. PP has stated that Annual operation expenses (OPEX) for operation and maintenance of pollution control measures would be around Rs. 50 crores. However, these estimates may escalate at the time of project execution.

- vi. ***Actions initiated to achieve ZLD in existing plant and post implementation of the expansion proposal.***

Reply: PP has submitted the following Actions initiated / implemented to achieve ZLD in existing plant and post implementation of the expansion proposal:

1. Total estimated effluent generation will be 1130 m³/hr.
2. The existing CETP capacity will be upgraded to 800 m³/hr from existing 673 m³/hr. At CETP, the existing RO system will be upgraded with high pH RO for

better treatment & process control. New clarifiers will be added to upgrade primary treatment facilities. This facility will be fitted with crystallizer for zero discharge.

3. New Coke Oven Effluent Treatment Plant (COETP) will be added to treat rest 330 m³/hr coke oven by-product plant (BPP) effluent separately. This facility will have membrane bio reactor (MBR), RO & crystallizer for zero discharge.
4. Plant drains which collect rain & seepage water will be connected to Storm Water Reservoir (38900 m³). From here, water will be recovered back & mixed with fresh water in Raw Water reservoir which is being supplied to plant network after necessary treatment.

- vii. ***Additional plantation scheme in the vacant land to increase greenery and to control fugitive emissions as the PM₁₀ and PM_{2.5} levels in the study area are higher than the NAAQ norms. 2500 trees shall be planted per ha.***

Reply:

Details of 33% green cover is given below:

- Existing : 200 hectare
- Planned additional: 215 hectare
- Total : 415 hectare

PP has submitted the Additional Plantation scheme corresponding to 2500 trees per hectare in vacant land will be carried out to increase greenery, which will help control fugitive emissions in the study area. The PP has also submitted that Indigenous plant species with fast growth are selected under greenbelt development. The tree species will include Akashmoni, Babul, Siris, Amaltas, Gulmohar, Neem, Nilgari, Jamun, Jhaun, Debdaru, Kadamba, Pipal, Am, Ganga imli, Kachnar, Bougainvillea, Karabi, Sisoo, Ganga imli etc.

- viii. ***Scheme for upgradation of Pollution control systems to achieve less than 30 mg/Nm³ particulate matter emissions. Further, the estimated reduction in pollution load shall be furnished as the CEPI score for the area is 49.62.***

Reply: PP has submitted Scheme for upgradation of pollution control systems to achieve average 30 mg/Nm³ particulate matter emission. Estimated reduction in pollution load is 24.14 tons/day from baseline of 40.5 tons/day as per norms.

- ix. ***CER table based on PH proceedings and SIA conducted shall be furnished. CER expenditure as per capex indicated in EIA shall be Rs 56.5 Cr and CER activities shall be completed in 4 years.***

Reply: PP has submitted the action plan based on PH proceedings and SIA conducted. An amount of Rs. 4820 lakhs have been earmarked to address the issues raised during public hearing and Rs. 830 Lakhs has been earmarked to address the issues based on SIA conducted.

- x. ***Scheme for, control of Dioxins/Furan emissions from sinter plants, charging and pushing emissions from Coke Ovens and mercury emissions from power plans.***

Reply: PP has submitted Scheme for (a) Control of Dioxins / Furan emissions from

sinter plants, (b) charging emission control at coke ovens, (c) Pushing emissions from Coke Ovens and (d) mercury emissions from power plant.

- xi. ***The data acquired through CEMS, shall be used for control of processes in order to control the stack emissions. This should include the MIS for closing the non-conformity loop.***

Reply: PP has submitted the details of Current facilities implemented for data acquisition & control of stack emission. PP has further furnished the information w.r.t. Use for control of processes to control stack emission including MIS. Also PP has submitted that existing processes will be deployed with similar systems in all upcoming plant. While process and plant equipment are designed to perform within emission norms, actions will be taken for controlling stack emission in case level goes beyond norms. Continuous emission monitoring system (CEMS) is already installed for 24/7 measurement of pollutant load at all existing stacks. Summary of continuous data forms part of daily / weekly / monthly MIS which are reviewed by different levels within the organization on regular basis.

- xii. ***Confirmation is sought on the following points:***

- ***PP shall install a state-of-the-art Waste Recycling Plant (WRP) to process various types of slags and wastes generated in the plant to recover and recycle metallics, fluxes, aggregates and boulders.***

Reply: Waste recycling plant for recovery & recycling of metallics, fluxes, aggregates and boulders has been set-up and is in operation. Accordingly, details have been submitted.

- ***PP shall use SMS Slag as soil conditioner in watershed management area to supplement micro nutrients.***

Reply: PP has submitted the following:

Background:

- SMS slag has total lime of ~ 60%
- SMS slag is a by-product generated during steel making operation.
- In recent years new technologies are coming-up for value-added use of SMS slag. One such technology is to make use of SMS slag as soil conditioner.

Current status:

- Presence of Ca and P content improves properties of soil and by increasing plant growth.
- In this regard, research project has been taken up at Tata Steel, R&D wherein LD slag will be used for converting it into yellow gypsum. This will then be added as soil conditioner.
- Feasibility of using this slag as soil conditioner in watershed management areas would be explored in consultation with concerned authorities

- ***PP shall recover and recycle unburnt carbon from BF flue dust and GCP sludge.***

Reply: PP has stated that

- Current operating sinter plant and upcoming pellet have capability of consuming BF sludge & BF flue dust (Carbon in range of 30-40%) replacing coke breeze requirements.

- BF flue dust can be used in pellet plant with addition rate of 2.8% with input raw material.
 - BF GCP sludge can be used along with other reverts with addition rate of 9% as a part of sinter base mix.
 - 100% utilization of BF flue dust & GCP sludge.
 - Further as a part of value maximization, Tata Steel is also working on project to produce cold bonded briquettes with iron & carbon bearing reverts from BF flue dust and GCP sludge and use it in blast furnace as a replacement of solid fuel.
- ***PP shall use steam and CO₂ to age and fix the SMS slag for use as concrete for road making.***

Reply:

a) Use of steam for the ageing of steel slag:

○ Background

- The free CaO present in LD slag reacts with atmospheric moisture and brings with it a volume increase.
- The LD slag during expansion develops internal cracks when used as is without any ageing or weathering
- Natural weathering of steel slag in open yard takes approx. 5-6 months for completion.
- Use of LD slag size >6 mm requires proper ageing to be used as aggregates for avoiding deterioration and increased durability.
- Steam aging process is an advance methodology to reduce the free lime present in LD slag

○ Current Status

- Steam ageing involves the ageing of LD slag by the injection of high-pressure steam injected through perforated pipe in open pit where fresh LD slag is stored.
- The aging time reduces from 5-6 months to 6 days.
- An open steam aging setup of capacity 20KTPA has been set-up in Tata Steel Kalinganagar.

○ Output:

LD Slag having Free lime – less than 2%. The product will be sold as Tata Aggreto branded product

b) Use of CO₂ for the treatment of LD slag:

○ Background:

- The high content of basic oxides indicates that steelmaking slag possesses a high alkalinity and a high total theoretical CO₂ sequestration capacity.
- It has been evaluated that approximately 0.25 kg CO₂ per kg of slag can be sequestered based on the total calcium content.

- Current Status:
 - Tata Steel R&D is working on a project for the carbonation of LD slag with use of CO₂ present in flue gas.
 - The project is still under development phase.
- **Confirmation that PP shall practice 100 percent waste utilization.**

Reply: PP has submitted the following:

- Process solid wastes generated in Kalinganagar would be approx. 5.1 MTPA after the implementation of 8 MTPA expansion project.
- Bench mark utilization of process solid waste is 98 % as per available data across the world.
- Concept of recycling back into iron and steel making process has been evaluated by analysis of chemistry, granulometry, dry/wet form and applicability of different processes in use elsewhere in industry or upcoming technologies.
- Studies for best utilization of the solid waste is carried out with an outcome of ~98 % utilization. This is based on:
 - Sale after value addition
 - Recirculation of solid wastes back into the processes after value addition.
 - Some solid wastes would go for secured land fill as they are zero valued and have no further potential applications and some would get incinerated.

Accordingly, PP has submitted the action plan for Utilization of slags, Processing of solid wastes having iron, carbon or both and wastes to be sent to secured land fill.

xiii. Scheme for improvement in drainage pattern of the plant area.

Reply: PP has submitted the details w.r.t. existing drainage system and the Scheme for improvement in drainage pattern which includes the following:

Plant drains which collect rain & seepage water will be connected to Storm Water Reservoir (38900 m³). From here, water will be recovered back & mixed with fresh water which is being supplied to plant network after necessary treatment.

- Construction of Storm water reservoir is already completed.
- Diversion work from drain to storm water reservoir is under progress and will be completed by Feb-21.
- Around 200-250 m³/hr water recovery from this set up is already started from Oct 20
- Further augmentation of this capacity to achieve 600 to 700 m³/hr water recovery will be completed in phased manner by March, 2022.

PP has further submitted that a study by IIT Bhubaneswar is underway on Contribution of ground water table to plant drainage system. Based on this study, further improvement to drain network can be taken up as per recommendation.

xiv. Details of health center proposed including skin care for employees and neighboring community.

xv. **Reply:** PP has submitted the Details of health centers available and further action proposed, including skin care for employees and neighboring community.

xvi. **Power saving by implementation of Slip Power Recovery System (SPRS) for the large motors shall be practiced in the plant.**

Reply: PP has stated that Slip Power Recovery System is used along with slip ring motor. This is a method of controlling speed of Induction motors and also enhance overall efficiency.

xvii. **PP shall provide details of specific water and power consumption details pre and post operation.**

Reply: PP has submitted the details along-with the breakup of specific water and power consumption details pre and post expansion during operation stage. The existing Specific Water Consumption from all facilities is 4.19 m³/ton of crude steel whereas for proposed 8 MTPA it will be 4.5 m³/ton of crude steel. The specific power consumption details are as follows:

Sl. No.	Plant Group	3.0 MTPA	8.0 MTPA
		Specific Power Consumption	
		KWH/T	KWH/T
1	Up to Crude Steel Stage	309.52	340.545
2	Up to Crude Steel + Mill Stage	461.36	571.59
3	Crude Steel + Mill Stage + Other Facilities	659.92	728.175

25.2.7 Member Secretary apprised the EAC that in pursuance to the EAC recommendations, following action have been initiated by the Ministry on 28/09/2020:

- i. Direction was issued to the PP under section 5 of the EP Act, 1986 to suspend the construction activities of unimplemented portion envisaged under the EC dated 7/11/2006 with immediate effect till the fresh EC is obtained
- ii. Legal action initiated against PP by sending a letter to the State Government of Odisha with a request to take action under section 15 read with section 19 of EP Act, 1986

25.2.8 With respect to the MoEF&CC direction dated 28/09/2020 regarding stoppage of construction activity, PP informed that they have initiated for safe closure of all construction sites began immediately after receipt of above-mentioned letter and by 16/10/2020 all construction activities under EC dated 7/11/2006 were suspended.

25.2.9 During the course of meeting, PP was requested to submit their revised reply with respect to employment opportunity for local people, justification for reduction in particulate matter level in ambient air, mock drill details, revised EMP budget, action plan for green belt development covering 33% of the project area, specific water and energy consumption, monitoring schedule for dioxins and furans, provision of PTFE membrane bags in bag houses and health care facility. Accordingly, revised reply was submitted and deliberated upon by the EAC.

Observations of the Committee

25.2.10 The Committee noted the following:

- i. The Committee noted that the EIA/EMP report is found to be in order reflecting the present environmental concerns and the projected scenario for all the environmental

components. The Committee has found the baseline data reported and incremental GLC due to the proposed project are within NAAQ standards.

- ii. The Committee has also deliberated on the public hearing issues as well as action plan to address the issues raised public hearing and found satisfactory.
- iii. Additional information as well as written reply submitted during the course of meeting by the project proponent found to be satisfactory, and addressing the concerns of the Committee.
- iv. The EAC has considered the proposal only on merit as per the directions of the Competent Authority.

Recommendations of the Committee

25.2.11 In view of the foregoing and after detailed deliberations, the committee recommended the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the following specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 pertaining to integrated steel plants based on project specific requirements:

A. Specific conditions

- i. Green belt shall be developed in 33 % of the plant area in first two years and maintained later for gap fillings, casualty replacements and ensuring survival.
- ii. Biodiversity park being developed shall have a section on Species that control air pollution. It will also have a section of locally rare and endangered species.
- iii. Plant shall be ZLD. Reverse Osmosis and Multiple Effect Evaporator (MEE) shall be provided for Coke Oven effluent treatment.
- iv. Pollution control systems and equipment shall be upgraded/ designed to achieve less than 30 mg/Nm³ particulate matter. In existing systems, the bags under scheduled replacement cycle shall be replaced with PTFE bags.
- v. PP shall minimize and control Dioxins/Furan emissions from sinter plants, charging and pushing emissions from Coke Ovens and mercury emissions from power plans. Dioxins and furans shall be monitored half yearly. Monitoring reports shall be submitted regularly to RO.
- vi. Adequate space shall be kept vacant for installation of dioxin control in future.
- vii. The data acquired through CEMS, shall be used for control of processes in order to control the stack emissions. This should include the MIS for closing the non-conformity loop.
- viii. SMS Slag shall be used as soil conditioner in watershed management area to supplement micro nutrients.
- ix. PP shall recover and recycle unburnt carbon from BF flue dust and GCP sludge.
- x. PP shall use steam and CO₂ to age and fix the SMS slag for use as concrete for road making.
- xi. 100 percent waste utilization shall be ensured. PP shall install a state-of-the-art Waste Recycling Plant (WRP) to process various types of slags and wastes generated in the plant to recover and recycle metalics, fluxes, aggregates and boulders.
- xii. PP Shall use ultra-low NOx burner with three stage, combustion, flue gas recirculation and auto combustion control system in the new plant.

- xiii. Specific water consumption post expansion shall not exceed 4 m³ per ton of crude steel and specific power consumption shall be less than 620 kwh per ton of crude steel as committed in the reply to ADS points.

B. General conditions

I. Statutory compliance:

- i. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- iii. The cameras shall be installed at suitable locations for 24X7 recording of battery emissions on the both sides of coke oven batteries and videos shall be preserved for at least one-month recordings.
- iv. Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.
- v. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- vi. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- vii. Secondary emission control system shall be provided at SMS Converters.
- viii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- ix. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.

- x. The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.
- xi. Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility).
- xii. Land-based APC system shall be installed to control coke pushing emissions.
- xiii. Monitor CO, HC and O₂ in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.
- xiv. Vapour absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.
- xv. In case concentrated ammonia liquor is incinerated, adopt high temperature incineration to destroy Dioxins and Furans. Suitable NO_x control facility shall be provided to meet the prescribed standards.
- xvi. The coke oven gas shall be subjected to desulphurization if the sulphur content in the coal exceeds 1%.
- xvii. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
- xviii. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.
- xix. The project proponent shall install Dry Gas Cleaning Plant with bag filter for Blast Furnace and SMS converter.
- xx. Dry quenching (CDQ) system shall be installed along with power generation facility from waste heat recovery from hot coke

III. Water quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.

- iii. The project proponent shall provide the ETP for coke oven and by-product to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time as amended from time to time;
- iv. Adhere to 'Zero Liquid Discharge'
- v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- vi. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
- vii. Tyre washing facilities shall be provided at the entrance of the plant gates
- viii. CO₂ injection shall be provided in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning.
- ix. The project proponent shall practice rainwater harvesting to maximum possible extent.
- x. Treated water from ETP of COBP shall not be used for coke quenching.
- xi. Water meters shall be provided at the inlet to all unit processes in the steel plants.
- xii. The project proponent shall make efforts to minimize water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

IV. Noise monitoring and prevention

- i. Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation And Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

V. Energy Conservation measures

- i. The project proponent shall provide TRTs to recover energy from top gases of Blast Furnaces.
- ii. Coke Dry Quenching (CDQ) shall be provided for coke quenching for the coke oven plant.
- iii. Waste heat shall be recovered from Sinter Plants coolers and Sinter Machines.
- iv. Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.
- v. Use hot charging of slabs and billets/blooms as far as possible.

- vi. Waste heat recovery systems shall be provided in all units where the flue gas or process gas exceeds 300°C.
- vii. Explore feasibility to install WHRS at Waste Gases from BF stoves; Sinter Machine; Sinter Cooler, and all reheating furnaces and if feasible shall be installed.
- viii. Restrict Gas flaring to < 1%.
- ix. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
- x. Provide LED lights in their offices and residential areas.
- xi. Ensure installation of regenerative type burners on all reheating furnaces.

VI. Waste management

- i. An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 Kg/l shall be installed to use slag as river sand in construction industry.
- ii. Tar Sludge and waste oil shall be blended with coal charged in coke ovens.
- iii. Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.
- iv. Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.
- v. Used refractories shall be recycled as far as possible.
- vi. SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway track ballast and other applications. The project proponent shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.
- vii. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.
- viii. Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.
- ix. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

- i. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant
- ii. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

VIII. Public hearing and Human health issues

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

IX. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the

relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

25.3 Proposed integrated Ferro Alloy & Steel complex including 2x65 MW Captive coal based power plant by **M/s. Krishna Godavari Power Utilities Limited** located at Wadapally Village, Dhamarcharla Mandal, **Nalgonda District, Telangana**. [Online Proposal No. IA/TG/IND/177071/2020; File No. J-11011/245/2020-IA.II(I)] – **Prescribing of Terms of Reference– regarding.**

25.3.1 **M/s. Krishna Godavari Power Utilities Limited** has made application vide online proposal no. IA/TG/IND/177071/2020 dated 02/11/2020 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

25.3.2 Krishna Godavari Power Utilities Ltd., is proposing to set up a Ferro Alloys & Steel Complex comprising Submerged Electric ARC Furnace, Lime Kiln, Electric Induction Melting Furnaces, Rolling Mill with an aim to supply Ferro Alloys for manufacture of Special Steels for which Government of India announced Production Linked Incentive (PLI) schemes recently.

25.3.3 The power requirement of the project will be met by 2x65 MW of coal based Captive Power Plant.

25.3.4 The proposed unit will be located at Village: Wadepally, Taluka: Dhamarcharla, District: Nalgonda, State: Telangana. The site is located at 1.83 km from River Krishna and 183km by road from Hyderabad, the capital of Telangana. The proposed plant location is located at 58.5 km from District Headquarters, Nalgonda. The site is well connected with Miryalaguda-Guntur State Highway (SH-2) which is passing at 0.67 km from proposed plant boundary.

25.3.5 The details of location of the project site is given as below:

Description	Details		
Project Site	Wadepally Village, Dhamarcharla, Nalgonda District, Telangana		
Survey No.	29/1, 29/2, 147, 155, 152, 153, 154, 82, 89, 90, 91/1, 91/2, 92, 88, 83, 84, 85, 86, 87, 88, 115/1, 130. 114, 118		
Coordinates	355176.611E, 1844651.052N		
Total Area of Project	74.2 Ha (178.8 acres)		
Access Road	SH-2	0.67 km	E
District Headquarter	Nalgonda	58.5 km	NNW
Nearest Town	Miryalaguda	22 km	NW
Nearest Railway Station	Vishnupuram Railway station	2.4km	N
Nearest Airport	Rajiv Gandhi International Airport	143 km	NW

25.3.6 The proposed unit details along with their capacities are given as below:

FACILITY	PRODUCT	CAPACITY (TPA)
Submerged Arc Furnace	Ferro Silicon	50,000

FACILITY	PRODUCT	CAPACITY (TPA)
7 X 20 MVA	Silicon Manganese	50,000
	Ferro Manganese	70,000
	Ferro Chrome	50,000
Mini Blast Furnace 1X380 m ³	Pig Iron	156,000
Kilns 4X100 TPD	Sponge Iron	120,000
Lime Kilns 2X100 TPD	Calcium Carbide	28,500
Induction Furnace 4X25 MT	MS ingots and billets	273,000
Rolling Mill 1X1000 TPD	Rolling Mill	278,000
Power Plant	Power Plant Coal Fired	2X65 MW
Power Plant	Power Plant WHRB	8 MW

- 25.3.7 No national park/wildlife sanctuary/biosphere reserve/ tiger reserve/ elephant reserve etc. are located in the core and buffer zone of the project.
- 25.3.8 Total project cost is approx INR 720 Crores. There will be a temporary influx of about 1000 workers during construction and about 950 employees during operational phase of the power plant. Among which 450 will be direct employment (skilled) and 500 will indirect employment (unskilled people).
- 25.3.9 The raw material requirement for the proposed unit is given below-

S. No.	RAW MATERIALS	REQUIREMENT (TPA)		
		For Ferro Alloys Plant	For Pig Iron & Steel Plant	Calcium Carbide Plant
1.	Chrome ore	120000	-	-
2.	Manganese ore	300000	-	-
3.	Ferro manganese slag	20000	-	-
4.	Quartz	150000	-	-
5.	Iron ore	115000	135000	-
6.	Lime stone	66000	42000	12000
7.	Coke	92000	28000	-
8.	Char coal	73500	-	9,500
9.	Electrode paste (in KGs)	5250	1000	250
10.	Steel sheet (in KGs)	480	100	-
11.	Lancing pipes	469000	112000	12000
12.	M.S.Rounds	880	100	20
13.	Oxygen gas	116000	84000	-

25.3.10 Water Requirement:

- Around 12 Cusecs (29,351 m³/day) of water will be required for the project.
- 10,833 m³/day of water is needed for the power plant.
- About 1,000 m³/day make up water will be required for the proposed Ferro Alloy complex.

- Industrial water will be recycled after suitable treatment. Fresh make up water will be added to compensate for the losses in the circulation system.

25.3.11 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

Observations of the Committee

25.3.12 The Committee noted the following:

- i. This is a proposal for an integrated metallurgical and a chemical plant.
- ii. 178 Acre land is available in two adjacent plots.
- iii. Water shall be drawn from Krishna River.
- iv. Scope of chemical plant is not clear. PFR is silent on process, PFD and material balance for Sodium Saccharine and its by-products. This may be dealt by concerned EAC in the MoEF&CC.

Recommendations of the Committee

25.3.13 After deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at Annexure-1 read with additional ToRs at Annexure-2:

- i. Ground water shall not be abstracted. Only SW shall be used in the plant.
- ii. Jigging and briquetting facility shall be included to recover metal from waste.
- iii. TCLP test shall be conducted to ascertain whether to send waste to TSDF or for construction purpose.
- iv. PP shall use ultralow NOx burner with three stage combustion, flue gas recirculation and auto combustion control system.
- v. It should be ensured that plant is not in flood plain of Krishna river.
- vi. 85-90% rolling shall be done as hot charged and balance 10-15 % through Reheating furnace to run on LDO.
- vii. A detailed traffic and transportation study due to the proposed project shall be carried out.
- viii. Particulate matter emission from the stacks shall be less than 30mg/Nm³. Better filter bags e.g. PTFE Bags may be used.
- ix. Air cooled condenser shall be used in the captive power plant.
- x. Plant roads shall be paved and industrial vacuum cleaner shall be used to clean the roads regularly to keep fugitive emission under control.

25.4 Greenfield project comprising of 2 x 350 TPD DRI Kiln (2,31,000 TPA), 5 x 20 T Induction Furnace (3,30,000 TPA), 1x800 TPD Rolling Mill (2,64,000 TPA), Power Generation – 40 MW (20 MW through Waste Heat Recovery Boiler (WHRB) and 20 MW through Circulating Fluidized bed combustion (CFBC) Boiler) by **M/s. Rama Power & Steel Pvt. Ltd** located at Village: Khamaria, Tehsil: Tilda, **District: Raipur, Chhattisgarh** [Online Proposal No. IA/CG/IND/182361/2020; File No. J- 11011/278/2020-IA.II(I)] – **Prescribing of Terms of Reference– regarding.**

- 25.4.1 **M/s. Rama Power & Steel Pvt. Ltd** has made application vide online proposal no. IA/CG/IND/182361/2020 dated 07/11/2020 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

- 25.4.2 M/s. Rama Power & Steel Pvt. Ltd. proposes to install DRI Kiln (2,31,000 TPA), Induction Furnace (3,30,000 TPA), Rolling Mill (2,64,000 TPA), Power Generation – 40 MW (20 MW through Waste Heat Recovery Boiler (WHRB) and 20 MW through Circulating Fluidized bed combustion (CFBC) Boiler) to manufacture Sponge Iron – 2,31,000 TPA, MS Billets / Hot Billets – 3,30,000 TPA, Structural Steel & Rolled Products–2,64,000 TPA, WHR based Power Plant –20 MW, CFBC based Power Plant – 20 MW.
- 25.4.3 PP has reported that earlier TOR has been issued by MoEF&CC, New Delhi in name of Rama Power & Steel Pvt. Ltd. vide F.No. IA-J-11011/168/2017-IA-II(I) dated 22nd May 2017, comprising of most of the khasra no. of the present proposal and TOR is valid till 21st May 2021. Project Proponent could not proceed with the further EC process due to certain unavoidable circumstances. As validity of TOR is expiring on 21st May 2021, it will be difficult to complete the further EC process i.e. Draft EIA preparation, completion of Public Hearing, Final EIA Submission, etc., before 21st May, 2021 and also some changes in plant configuration and production capacities. Hence PP has decided to withdraw the earlier application and a fresh application has been submitted as referred above with REVISED Plant Configuration.
- 25.4.4 The proposed green field unit will be located at Village-Khamaria, Tehsil-Tilda, District-Raipur, Chhattisgarh.
- 25.4.5 Total land envisaged for the proposed project is 20.122 ha. (49.7 acres), out of which 10.491 ha. of land is in possession of management and remaining 9.631 ha. Land (comprising of 8.651 ha. of Govt. Land & 0.98 ha. of Private Land) is at an advance stage of acquisition. Of the total area, 7.561 ha. (37.57%) land has been earmarked for greenbelt development. No Forest land involved.
- 25.4.6 It is reported that Mohrenga PF (5.0 Kms.) and Khalidabri PF (8.3 Kms.) exists within the 10 km radius of the project site. No National Park/Wild life sanctuary/Biosphere reserve/tiger reserve/Elephant corridor are reported to be located in the core and buffer zone of the project site. Mahanadi Branch Canal (2.6 Kms.), Kirna Reservoir (2.4 Kms.), Pindraon Pond (7.5 Kms.), Kumhari Pond (8.1 Kms.) and Few Streams & ponds are present within 10 Km. radius. The area also does not report to form corridor for Schedule – I fauna.
- 25.4.7 Total project cost for proposed project is approx. Rs. 415 Crores. Proposed employment generation from proposed project will be 200 nos. both direct & indirect employment.
- 25.4.8 The targeted production capacity of the total plant is 0.264 million TPA. The Iron ore for the project would be procured from Barbil, Odisha OR NMDC, Chhattisgarh. The ore transportation will be done through by Rail & Road (through covered trucks).
- 25.4.9 The proposed capacity for different products are as below:

S.No.	Unit (Products)	Plant Configuration (Production Capacity)	
1.	DRI Kilns (Sponge Iron)	2 x 350 TPD (2,31,000 TPA)	
2.	Induction Furnace with Concast (MS Billets / Hot billets)	5 x 20 T (3,30,000 TPA)	
3.	Rolling Mill (Structural Steel & Rolled products)	1 x 800 TPD (2,64,000 TPA)	
4.	Power Plant (Electricity) (40 MW)	WHRB Power Plant	20 MW
		CFBC Power Plant	20 MW

25.4.10 Proposed raw material and fuel requirement for proposed project are Iron Ore, Dolomite, Scrap, Ferro Alloys, Requirement would be fulfill by external purchase /in house. Fuel Consumption will be mainly Coal & LDO:

Raw Material		Quantity (TPA)	Source	Mode of Transport
For DRI Kilns (Sponge Iron)				
Iron Ore		3,69,600	Barbil, Orissa NMDC, Chhattisgarh	By Rail & Road (through covered trucks)
Coal	Indian	3,00,300	SECL Chhattisgarh / MCL Orissa	By Rail & Road (through covered trucks)
	Imported	1,92,192	Indonesia / South Africa / Australia	Through sea route, rail route & by road
Dolomite		11,550	Chhattisgarh	By Road (through covered trucks)
For Steel Melting Shop (MS Billets / Hot billets)				
Sponge Iron		3,33,000	Own generation & external purchase from Raipur	---- By Road (through covered trucks)
MS Scrap		50,000	Raipur	By Road (through covered trucks)
Ferro alloys		17,000	Local Area	By road (through covered trucks)
For Rolling Mill (Structural Steel & Rolled products)				
M.S.Billets		2,90,400	Own generation Raipur	---- By road (through covered trucks)
LDO		13,200	Chhattisgarh	Through tankers
Gasifier for Rolling mill				
Coal (Indian)		52,800	SECL Chhattisgarh / MCL Orissa	By Rail & Road (through covered trucks)
Coal (Imported)		33,792	Indonesia / South Africa / Australia	Through sea route, rail route & by road

Raw Material		Quantity (TPA)	Source	Mode of Transport
For CFBC Boiler (Power Generation 20 MW)				
Dolochar		69,300	In plant generation	Through Covered Conveyors
Coal	Indian	99,000	SECL Chhattisgarh / MCL Orissa	By Rail & Road (through covered trucks)
	Imported	63,360	Indonesia / South Africa / Australia	Through sea route / rail route / by road

- 25.4.11 Power required for the proposed project will be 43 MW and same will be sourced from Captive Power Plat (40 MW) and remaining from State Grid.
- 25.4.12 Water consumption for proposed project will be 1455 KLD and same will be sourced partly from Ground Water Sources and partly from Kirna Reservoir which is at 2.4 Kms. from the project site. Total wastewater generation from the proposed project will be 322 KLD. There will be no effluent discharge from the DRI plant, SMS as closed-circuit cooling system will be adopted. Effluent from Rolling Mill will be sent to settling tank & will be recycled through closed circuit cooling system. Effluent from Gasifier will have mainly phenolic compounds and will be used in After Burning Chamber of DRI kilns for quenching and to regulate the temperature of the hot flue gas in accordance with inlet requirement of waste heat recovery boiler. Effluent from power plant will be treated in ETP and after ensuring compliance with SPCB norms, it will be utilized for dust suppression, ash conditioning and for greenbelt development. Sanitary waste water will be treated in STP. Zero Liquid effluent discharge will be followed.
- 25.4.13 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 25.4.14 Name of the consultant: Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [S.No. 129, List of ACOs with their Certificate / Extension Letter no. Rev. 4, Nov 10, 2020].

Observations of the Committee

- 25.4.15 The Committee noted the following:
- i. This is a green field project for which TOR was issued on 22nd May 2017. TOR is valid till 21st May 2021. PP explains that EC process cannot be completed by May 2021 due to delay hence fresh TOR is required.
 - ii. Total land requirement is 20.122 ha of which 10.491ha is in the possession of PP and balance under acquisition.
 - iii. Producer gas is proposed for reheating furnace.
 - iv. 1455 KLD water is to be drawn from Ground and Kirna Reservoir.
 - v. PGP effluent containing phenolic water and Tar shall be burnt in after burning chamber of DRI Kiln.

Recommendations of the Committee

- 25.4.16 After deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at Annexure-1 read with additional ToRs at Annexure-2:
- i. No ground water abstraction, water to be drawn from Kirna reservoir only.
 - ii. PGP shall not be installed. 90 % hot charging shall be practiced and balance 10% can be rolled through RH Furnace to be operated on LDO.
 - iii. Rolling mill shall have proper ETP for oil removal, settling and filtration of settled solids.
 - iv. Air cooled condensers shall be used for CPP.
 - v. Particulate matter stack emission shall not exceed 30 mg/Nm³. Better filter bags e.g. PTFE Bags may be used.
 - vi. A detailed traffic and transportation study due to the proposed project shall be carried out.
 - vii. Detailed engineering layout of the plant shall be furnished.
 - viii. Plant roads shall be concreted and a vacuum cleaner shall be included to clean roads regularly to reduce fugitive emission.
 - ix. Action plan for ZLD shall be submitted.
 - x. Action plan for 100 % waste utilization shall be submitted.
 - xi. A 30 m deep green belt shall be maintained towards the village that is only 200 m away from plant boundary.
 - xii. PP shall use low NO_x burner with three stage combustion, flue gas recirculation and auto combustion control system.
 - xiii. Use low sulphur coal or provide limestone gypsum process for absorption of SO₂.

25.5 Greenfield project for implementation of production facilities for MS Billet, Steel Rerolled products, Wire Rod, Drawn Wire; Ferro Alloys and/or Pig Iron production by **M/s. NR Steel and Ferro Private Limited** located at Plot No. 251, 252, 253 & 254 OP Jindal Industrial Park, Punjipathra, Village-Tumidih Tahsil-Gharghoda, **District- Raigarh, Chhattisgarh** [Online Proposal No. IA/CG/IND/180780/2020; File No. J- 11011/200/2020-IA.II(I)] – **Amendment in ToR**– regarding.

25.5.1 **M/s. NR Steel and Ferro Private Limited** has made application vide online proposal no. IA/CG/IND/180780/2020 dated 31/10/2020 along with the Form 3, revised Form-I, copy of pre-feasibility report and sought for amendment in the ToR accorded by the Ministry vide letter no. J-11011/200/2020-IA.II(I) dated 19/09/2020. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

25.5.2 M/s. NR Steel and Ferro Private Limited was accorded Terms of Reference vide letter no. J-11011/200/2020-IA.II(I) dated 19/09/2020 for the project titled “Greenfield project for implementation of production facilities for MS Billet, Steel Rerolled products, Wire Rod, Drawn Wire; Ferro Alloys and/or Pig Iron production.”

25.5.3 The amendment sought by the project proponent includes **enhancement of the capacity of proposed Ferro Alloys plant from 9 MVA X 2 nos to 9 MVA x 4 nos**. Therefore, it is proposed to implement additional 9 MVA X 2 Nos. of Submerged Arc Furnace by which

production capacity of Ferro Alloys and/or Pig Iron will get increased. Rest of the facilities and capacities will remain unchanged. The company is proposing the aforementioned change in Ferro Alloys configuration for implementation of these two additional Ferro Alloys furnaces in future due to assured availability of additional power by JSPL who has developed the industrial area for the power intensive steel units. Also the Govt of Chhattisgarh has notified on 22/10/2020 stating that special incentives for the projects with more than 100 Crores fixed investment in steel sector in the state. With the proposed changed the unit fixed investment will be now about Rs 120 crores. Thus by addition of these two Ferro Alloys furnaces company will be able avail the proposed incentives also which will make the unit more viable.

25.5.4 Other Changes: Details as per the granted ToR vis-à-vis proposed changes:

- i. The power requirement will increase from 30 MVA to 50 MVA.
- ii. Manpower requirement will increase from 337 to 360 persons.
- iii. Water requirement will increase from 453 to 560 KLD
- iv. Raw Material requirement will increase to double for ferro alloys.
- v. Slag Generation will increase to double for Ferro Alloys.
- vi. Investment will increase from Rs. 97.45 Crore to Rs 119 Crores plus CER.

25.5.5 The project cost is revised from Rs. 97.45 Crore to Rs 119 Crores.

25.5.6 PP has submitted that the EIA study is getting completed. The Public consultation will be completed by January 2021. The work will be started after receipt of EC and will be completed in next 15 months for first phase and the next phase will be completed in next 18 months. So entire project will be completed before September 2024

25.5.7 There is no court case or violation under EIAs Notification to the project or related activity.

25.5.8 Name of the EIA consultant: M/s. Anacon Laboratories Pvt. Ltd. (S.No. 60, List of ACOs with their Certificate / Extension Letter no. Rev. 4, Nov 10, 2020).

Observations of the Committee

25.5.9 The Committee noted the following:

- i. It is a green field project located in OP Jindal Park in CG. TOR was granted in Sept 2020.
- ii. PP wants to add two more 9 MVA SAFs to the scope.

Recommendations of the Committee

25.5.10 In view of the foregoing and after deliberations, the Committee recommended for amendment as mentioned above in the ToR dated 19/09/2020 subject to stipulation of following specific ToR.

- i. Particulate matter stack emission shall not exceed 30 mg/Nm³. Better filter bags e.g. PTFE Bags may be used.
- ii. A detailed traffic and transportation study due to the proposed project shall be carried out.
- iii. Detailed engineering layout of the plant shall be furnished along with the EIA report.

- iv. Plant roads shall be concreted and a vacuum cleaner shall be used to clean roads regularly to reduce fugitive emission.

- 25.6 Proposed 0.6 MTPA Iron Ore Pellet Plant, 5 Nos. (4W +1S) Producer Gas Plant of Capacity of 5000 Nm³/hr each & 1.2 MTPA Iron Ore Beneficiation Plant by **M/s Kashvi International (P) Ltd.** located at-Champadihi, under Jhumpura Tehsil of **Keonjhar District, Odisha** [Online Proposal No. IA/OR/IND/181479/2020; File No. J-11011/73/2019-IA.II(I)] – **Amendment in ToR**– regarding.

The project proponent vide email dated 25/11/2020 requested to withdraw their proposal. In view of this, the Committee recommended for accepting the withdrawal of the instant proposal.

- 25.7 Proposed Expansion Project by adding Iron Ore Beneficiation Plant -0. 6 MTPA, Sponge Iron 2 X 100 TPD, Induction Furnace 2 X 15 TPD, Rolling Mill 120000 TPA, Captive Power Plant 15 MW (WHRB – 8 MW + AFBC – 7 MW) by **M/s. Bhadrashree Steel and Power Private Limited** at Kunikeri village, **Koppal Taluk & District, Karnataka** - [Proposal No. IA/KA/IND/91002/2019. MoEF&CC File. No. IA-J- 11011/45/2019-IA-II(I)] – **Reconsideration for grant of ToR based on ADS reply - regarding.**

- 25.7.1 The salient features of the proposal cited above is given as below:

Details submitted by the project proponent

- i. M/s Bhadrashree Steel and Power Pvt Ltd is operating sponge iron plant of capacity 200 TPD at Kunikere Village of Koppal Taluk & District, Karnataka.
- ii. Proposed project expansion will be within the existing plant premises of 30 acres. The average elevation at the site is 549 MSL and is geographically located at 76° 11' 49.28" E Longitude & 15° 19' 27.77" N Latitude.
- iii. There is no forest, national park, wild life sanctuary, eco sensitive areas in surrounding 10 Km of the plant boundary. However, project site is located at a distance of 2.0 km (aerial distance) from the Tungabhadra Reservoir.
- iv. The proposed project is a brown field expansion project involving the expansion by adding ore beneficiation plant, sponge iron plant, induction furnace, rolling mill and captive power plant in the existing sponge iron plant within the existing land 30 acres.
- v. Proposed Configuration of the plant as given below.

S.No	Particulars	Existing	Proposed
1	Sponge Iron Plant	2 X 100 TPD	2 X 100 TPD
2	Induction Furnace	-	1 X 15TPD
3	Captive Power Plant	-	15 MW (WHRB – 8 MW & AFBC – 7 MW)
4	Beneficiation Plant	-	0.6 MTPA
5	Rolling Mill	-	120000 TPA

- vi. Required raw materials are as given below:

S.No	Raw material	Proposed quantity in tonnes
1	Iron Ore	96000
2	Coal	72000
3	Dolomite	3000
4	MS Scrap	11250
5		

- vii. The estimated cost of the project is Rs. 225.28 Cr.
- viii. Power Supply will be met from State Electricity Board (GESCOM), Substation of 15 MW and once the plant becomes operation, the power generated within the plant will be utilized back to the plant. The excess will be given to State/National Power Grid.
- ix. Total water Requirement for the proposed expansion project is 62,500 KLD which will be met by the Bore wells in the project site.
- x. The solid waste management scheme and disposal is given in below:

Plant	Waste	Scheme for management / disposal
Sponge Iron (DRI Kiln)	slag	Shall be sold to brick making
Captive Power Plant	Fly Ash	Shall be sold to brick making factory
Beneficiation Plant	Tailings	Shall be sold to brick making factory and also cement plants.
Tunnel Kiln/RHF	Fly Ash	Shall be sold to brick making factory
Generator/ Lubricants	Used oil	Shall be sold to the CPCB approved recycler
Gasifier	Coal Tar	Shall be used in road making
DM and RO Plant	Used Ion Exchange Raisin	Shall be sent to the nearest TSDF site

- xi. The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- xii. Name of the EIA consultant: M/s. Metamorphosis and SM Project Consultants Pvt. Ltd.[S.No. 50, List of ACOs with their Certificate / Extension Letter no. Rev. 4, Nov 10, 2020]
- 25.7.2 M/s. Bhadrashree Steel and Power Private Limited has made online application vide proposal no. IA/KA/IND/91002/2019 dated 9th January, 2019 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Nonferrous) under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.
- 25.7.3 The aforesaid proposal was earlier considered in 4th meeting of the Re-constituted EAC (Industry-I) held during 20-22nd February, 2019.

Observation of the Committee during meeting held on 20-22nd February, 2019

The Committee noted that the environmental clearance for the existing 60,000 TPA sponge iron manufacturing unit has been accorded by the Forest and Ecology Department,

Government of Karnataka vide letter no. FEE-81 ECO 2008 dated 15/04/2009. Further, the Committee also that the unit is under operation since 2009 with requisite consents from KSPCB.

Recommendation of the Committee during meeting held on 20-22nd February, 2019

After detailed deliberations, the Committee recommended that Ministry may seek clarification from Forest and Ecology Department, Government of Karnataka regarding the grant of environmental clearance to M/s. Bhadrashree Steel and Power Private Limited for establishment of 60,000 TPA sponge iron manufacturing unit as such units are covered under the schedule 3(a) of the EIA Notification, 2006 and require prior environmental clearance from MoEF&CC.

Therefore, the proposal is **deferred** for the want of additional information from Forest and Ecology Department, Government of Karnataka.

25.7.4 Project proponent has replied to ADS vide its letter dated 9/11/2020 by stating that State Government of Karnataka has sent a reply to the Ministry in this regard and requested to consider their proposal for grant of ToR. Accordingly, the proposal was placed before the EAC in its 25th meeting held on 25/11/2020.

25.7.5 In this regard, the Member Secretary apprised the EAC that as per the clarification furnished by the State Government of Karnataka vide D.O. No. FEE 112 ENV dated 6/10/2020 stating that the KSPCB had issued Consent for Establishment to the unit on 30.07.2005 which is prior to the inception of EIA Notification, 2006, dated 14/09/2006. The said industries were exempted from obtaining the EC under EIA Notification, 2006, as per sub para (ii) of para I of the circular F. No. J-11013/41/2006-IA.II(I) dated November 21, 2006 which reads as follows:

“Such projects for which NoCs issued before 14/09/2006, will not be required to take Environmental Clearance under EIA Notification, 2006”

In light of the above, the State Government opined that there is no irregularity is noticed in consideration of the application submitted by these industries

Observations of the Committee

25.7.6 The Committee noted that the instant proposal was discussed in 4th EAC held on Feb 2019 and deferred for want of clarification from State Government. The reply furnished by the State Government of Karnataka in this regard has been taken in to cognizance and the Committee satisfied with the same.

Recommendations of the Committee

25.7.7 After deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at Annexure-1 read with additional ToRs at Annexure-2:

- i. Only surface Water shall be used. Ground water abstraction shall not be permitted.
- ii. Particulate matter stack emission shall not exceed 30 mg/Nm³. Better filter bags e.g. PTFE Bags may be used.
- iii. A detailed traffic and transportation study due to the proposed project shall be carried out.

- iv. Iron Ore Beneficiation Plant tailings shall be dewatered and disposed dry. No slime pond shall be permitted.

26th November, 2020

- 25.8 Proposed expansion of Ferroalloys plant by installation of 2X7.5 MVA SEAFs for manufacture of Fe-Cr/Fe-Mn/Si-Mn/Fe-Si, expansion of Sponge Iron Plant by installation of 1X350 TPD DRI Kilns, Iron Ore Beneficiation Plant with Pellet Plant of capacity of 6,00,000 TPA; expansion of Captive Power Plant with installation of 8MW using waste heat DRI off gas and 2 X 16 MW AFBC utilizing dolochar and coal, expansion of Steel Melting Shop, installation of Rolling Mill with Reheating Furnace (Coal Gasifier /Pulverized Coal Fired/Oil fired or Direct Feeding from CCM) for production of 2,00,000 TPA Structural /Rebar /Rounds and installation of Cement Grinding Plant 1x1000 TPD for annual production of 3, 00,000 TPA PPC/PBFC by **M/s. Ispat Damodar Private Limited** located at village-Nambagram, PO. Digha, P.S.- Neturia, **Dist. Purulia, West Bengal** [Online Proposal No. IA/WB/IND/90432/2017; File No. J-11011/52/2017-IA-II(I)] – **Environment Clearance** – regarding.
- 25.8.1 M/s. Ispat Damodar Private Limited has made online application vide proposal no. IA/WB/IND/90432/2017 dated 17/11/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

- 25.8.2 The detail of the ToR is furnished as below:

Date of application	Consideration	Details	Date of accord
08/02/2017	16 th meeting held on 6 th -7 th of March, 2017	Terms of Reference	27/03/2017

- 25.8.3 The Expansion Project of M/s Ispat Damodar Private Ltd. is located in Village Nabagram, Tehsil: Neturia, P.O.- Digha, District: Purulia, West Bengal. The proposal is for expansion of Ferro alloys plant by installation of 2X7.5 MVA SEAFs for manufacture of Fe-Cr/Fe-Mn/Si-Mn/Fe-Si, expansion of Sponge Iron Plant by installation of 1X350 TPD DRI Kilns, Iron Ore Beneficiation Plant with Pellet Plant of capacity of 6,00,000 TPA; expansion of Captive Power Plant with installation of 8MW using waste heat DRI off gas and 2 X 16 MW AFBC utilizing dolochar and coal, expansion of Steel Melting Shop, installation of Rolling Mill with Reheating Furnace (Coal Gasifier /Pulverized Coal Fired/Oil fired or Direct Feeding from CCM) for production of 2,00,000 TPA Structural /Rebar /Rounds and installation of Cement Grinding Plant 1x1000 TPD for annual production of 3, 00,000 TPA PPC/PBFC.
- 25.8.4 It is reported that the existing project was accorded CTO by SPCB West Bengal on 2011. Further, the Consent to Operate from the West Bengal State Pollution Control Board obtained vide Lr. No. CO110173, dated 30/10/2018 and consent is valid up to 31/10/2023.

25.8.5 It has been reported that as EC was not availed from the MoEF & CC earlier, the Status of compliance of valid CTO was obtained from West Bengal Pollution Control Board on 5/03/2020.

25.8.6 The following are the existing and proposed plant configuration and production capacity:

Sl. No.	Facilities	Existing Capacity	Proposed Capacity	Ultimate Capacity
1.	Ferro Alloy Furnaces(Ferro Chrome/ Ferro Manganese /Silico Manganese/ Ferro Silicon) (SEAF)	4 x7.5MVA	2x7.5 MVA	6 x 7.5MVA
2.	Sponge Iron Plant	60000 TPA (2x100 TPD)	105000 TPA (1x350 TPD)	165000 TPA
3.	Iron Ore Beneficiation & Pelletisation Plant	-	600000 TPA	600000 TPA
4.	Captive Power Plant (WHRB + Dolochar AFBC)	8MW (4MW WHRB + 4MW AFBC)	40MW (8MW WHRB + 2X16MW AFBC)	48MW
5.	Steel Melting Shop & Continuous Casting Machine for Billet & Slab :	2x4T,1X8 T	2x15T	2x4T 1X8 T 2x15T
	Induction Furnace	-	1x20T	1x20T
	a) Electric Arc Furnace (EAF)	-	1x20T	1x20T
	b) Ladle Refining & Tilting Furnace (LRF)	-	1x20T	1x20T
	c) VOD/VID/AOD	-	1x20T	1x20T
	d) Continuous Casting Machine (CCM)	1x 6/11 m.	1x 6/11 m.	2x 6/11 m.
6.	Rolling Mill with Preheating Furnace (Coal gasifier/Pulverized Coal / Oil fired) or Direct feeding from CCM (Structural/ Rebar /Round)	-	200000 TPA	200000 TPA
7.	Cement Grinding Plant	-	1x1000TPD	300000TPA

25.8.7 The total land required for the project is 43.42 ha., out of which land acquired is 6.12 ha., own land is 9.79 ha., lease land of other companies is 8.19 ha. and 19.3 ha. is others. No forestland is involved. The entire land has been acquired by the project. No River passes through the project area. It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

25.8.8 The topography of the area is undulated and reported to lies between 22° 22' 03.3'' N Latitude and 87° 09' 09.3'' E longitude in Survey of India topo sheet No. 73 I/4, at an elevation of

120m AMSL. The ground water table reported to ranges between 2-5 m below the land surface during the post-monsoon season below the land surface during the pre-monsoon season. The project will use surface water from reservoir over Damodar. Hence, no pumping test was conducted for ground water.

25.8.9 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to for corridor for Schedule-I fauna. No schedule-I fauna is found the study area.

25.8.10 The details of the raw material requirement are given as below:

Sl. No.	Raw Material	Consumption in tonnes per ton of product	Amount in tonnes	Likely Source	Mode of Transport
Iron Ore Beneficiation Plant (8,25,000 T throughput)					
1.	Iron Ore Fines	0.8	8, 25,000	Mines in Barbil/ Joda of Odisha	By Rail
Pellet Plant(6,00,000 TPA)					
1.	Iron Ore Concentrate	1.1	6,60,000	Own production	--
2.	Coke Fines	0.15 (150kg)	9,000	Durgapur Steel Plant/ Coking Plant of Durgapur Project Ltd.	By Road in covered trucks
3.	Bentonite	0.05 (50kg)	3,000	Local Market	By Road
4.	Limestone	0.15 (150kg)	9,000	Biramitrapur, Sundargarh, Odisha	By Road in covered trucks
Sponge Iron Plant (1,65,000 TPA)					
1.	Iron Ore/Pellets	1.6	2,64,000	Mines in Barbil/ Joda of Odisha	By Rail /Road in covered trucks
2.	Washed Coal	1.3	2,14,500	Nearby Coal Mines of ECL and BCCL	By Rail /Road in covered trucks
3.	Dolomite	0.05 (50kg)	8,250	Biramitrapur, Sundargarh, Odisha or Mines in North Bengal	By Rail /Road in covered trucks
Ferroalloy Plant-Ferro chrome (81,000 TPA)					
1.	Chromites Ore Hard Lump	0.32	25,759	Sukinda, Jajpur dist., Odisha	By Rail /Road in covered trucks

Sl. No.	Raw Material	Consumption in tonnes per ton of product	Amount in tonnes	Likely Source	Mode of Transport
2.	Chromite Ore Briquettes	1.9	1,53,900	Own plant	--
3.	Chromite Ore Friable Lump	0.13	10,287	Sukinda, Jajpur dist., Odisha	By Rail /Road in covered trucks
4.	Quartzite	0.28	22,599	Mines in Bankura W. Bengal and Chhatisgarh	By Rail /Road in covered trucks
5.	Coke	0.5	40,582	Own production	--
6.	Coal	0.3	23,734	Nearby Coal Mines of ECL and BCCL	By Rail /Road in covered trucks
7.	Electrode Paste	0.025	2,025	Maharastra Carbon Ltd., Graphite India, Durgapur	By Rail /Road in covered trucks
Ferroalloy Plant-Ferro Manganese (1,18,800 TPA)					
1.	Manganese Ore	2.3	2,72,918	OMC Manganese mines in Odisha	By Rail /Road in covered trucks
2.	Dolomite	0.35	41,630	Biramitrapur, Sundargarh, Odisha	By Rail /Road in covered trucks
3.	Low Ash Met Coke	0.6	71,280	Durgapur Steel Plant /Coking Plant of Durgapur Projects Ltd.	By Rail /Road in covered trucks
4.	Electrode Paste	0.015	1,782	Maharastra Carbon Ltd., Graphite India Ltd., Durgapur	By Rail /Road in covered trucks
Ferroalloy Plant-Ferro Silicon (42,000 TPA)					

Sl. No.	Raw Material	Consumption in tonnes per ton of product	Amount in tonnes	Likely Source	Mode of Transport
1.	Quartz	0.5	84,000	Mines in Chhatisgarh, Odisha	By Rail /Road in covered trucks
2.	Charcoal	1.5	63,000	Local Market	By Rail /Road in covered trucks
3.	Iron Scrap	0.35	14,700	Local Rolling Mills and own production	By Rail /Road in covered trucks
4.	Electrode Paste	0.06	2520	Maharastra Carbon Ltd, Graphite India Ltd, Durgapur	By Rail /Road in covered trucks
5.	Cashing Sheet	0.005	210	Steel Plants Of SAIL/TISCO	By Road
6.	MS Rounds	0.027	1,140		
Ferroalloy Plant-Silico Manganese (89,100 TPA)					
1.	Manganese Ore	1.79	1,59,442	Manganese Mines in Odisha /Chhatisgarh	By Rail /Road in covered trucks
2.	Dolomite	0.35	31,185	Mines in Odisha, Chhatisgarh	By Rail /Road in covered trucks
3.	Fe-Mn Slag	0.6	53,460	Own Production	--
4.	Low Ash Met coke	0.6	53,460	Imported coal	From Australia by Ship & then by Rail /Road
5.	Electrode Paste	0.025	2228	Maharastra Carbon Ltd., Graphite India Ltd., Durgapur	By Rail /Road in covered trucks

Sl. No.	Raw Material	Consumption in tonnes per ton of product	Amount in tonnes	Likely Source	Mode of Transport
6.	Cashing Sheet	0.01	891	Steel Plants Of SAIL/TISCO	By Road
SMS - Induction Furnace (Annual Production-1,38,000 TPA)					
1.	Sponge Iron	0.806	1,11,350	In Plant Production	--
2.	Pig Iron /Iron Scrap	0.35	48,300	Local Market	By Road in covered trucks
3.	Ferrous alloys	0.02	2,760	In plant production	--
SMS- Electric Arc Furnace (96,000 TPA)					
1.	Iron Scraps	0.556	53,400	Local Rolling Mills	By Road in covered trucks
2.	Sponge Iron	0.456	43,770		--
3.	Graphite Electrode	0.009	860	Maharastra Carbon Ltd., Graphite India Ltd., Durgapur	By Road in covered trucks
4.	Lime	0.071	6,880	Biramitrapur, Sundergarh, Odisha	By Road in covered trucks
5.	Coke	0.013	1,260	In plant production	By Road in covered trucks
Reheating Furnace/Rolling Mill (2,00,000 TPA)					
1.	Billets	1.07	2,14,000	In plant production from IFs and EAFs	--
2.	Furnace Oil /Pulverized Coal	0.042	8400 KL	Local Oil Terminals	By Road in Tankers
Cement Grinding Plant (3,00,000 TPA)					
1.	Cement Clinker	0.6	1,80,000	From neighboring cement units	Rail /Road by covered trucks
2.	Fly Ash	0.35	1,05,000	In plant generation	--

Sl. No.	Raw Material	Consumption in tonnes per ton of product	Amount in tonnes	Likely Source	Mode of Transport
3.	Gypsum	0.05	15,000	IFFCO and PPL, Paradeep	By Rail /Road in covered trucks
Captive Power Plant based on WHRB (8 MW)					
1.	DRI Flue gas		1,05,000 Nm ³ /hr at 950-1000 ⁰ C	In plant Production	Duct
2.	Water		36 t/hr.	Panchet Reservoir on river Damodar	Pipe Line
Captive Power Plant based on FBC (2 X 16 MW)					
3.	Dolochar		4,585	In plant production	--
4.	Coal fines		14,850	In plant production and purchase from the market	By Rail / Road in covered trucks
5.	Coal		1,83,535	From nearby Coal fields of ECL and BCCL	By Rail / Road in covered trucks

- 25.8.11 The targeted production capacity of for various products has been given at Sl. No 4 of this summary. The ore for the plant would be procured from open market. The ore transportation will be done through Rail / Road.
- 25.8.12 The fresh water requirement of the project is estimated as 3028 m³ /day which will be obtained from the surface water source i.e from the reservoir of River Damodar. The permission for drawl surface water has been obtained vide Lr. no. 2903/1(3)/6C-I/2007, dated 15/09/2015.
- 25.8.13 The power requirement of the project is estimated as 77 MW, out of which 48 MW will be obtained from Captive Power Plant and balance from DVC grid.
- 25.8.14 Baseline Environmental Studies

Period	1 st October to 31 st December, 2017
AAQ parameters at eight locations	PM _{2.5} = 30.4. to 41.5 µg/m ³ PM ₁₀ = 54.1 µg/m ³ to 71.8 µg/m ³ SO ₂ = 9.1 to 10.7 µg/m ³ NOx = 9.6. to 16.8 µg/m ³
AAQ modelling	PM ₁₀ = 0.88239 µg/m ³ SO ₂ = 2.62351 µg/m ³ NOx = 2.36239 µg/m ³
Ground water quality at eight locations	pH: 7.03 to 7.84, Total Hardness 320 to 410 mg/l, Chlorides: 40 to 71 mg/l, Fluoride 0.63 to 0.81 mg/l. Heavy metals are within the limits.

Surface water quality at eight locations	pH: 7.5 to 7.83, DO: 4.8 to 8.2 mg/l and BOD: 1.9 to 2.8 mg/l.
Noise levels	40.8 to 72.5 dBA for day time and 34.6 to 55.1 dBA for night time.

- 25.8.15 It has been reported that there are no residential people in the core zone of the project. No R&R is involved. It has been envisaged that no family to be rehabilitated, which will be provided compensation and preference in the employment.
- 25.8.16 It has been reported that a total of 1775.4 tons of waste will be generated due to the project, out of which 1225.4 will be used in the plant and other purposes and 550 will be dumped in the earmarked dump yard. It has been envisaged that an area of 14.17 ha will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

Sl. No.	Description of Solid Waste	Quantity in TPD			Disposal Practice
		Existing	Proposed Expansion	Total	
I. Iron Ore Beneficiation Plant					
1.	Tailings from Iron ore Beneficiation Plant	--	550 TPD	550 TPD	Will be removed from tailing pond and disposed of in solid waste yard
II. Pellet Plant					
1.	Dust from APC device	--	30	30	Will be recycled back to the process
III. DRI Plant					
1.	Dolo Char	60	105	165	Used in FBC Boiler for power generation
2.	Coal fines	18	31.5	49.5	Used in FBC Boiler
3.	Dust from ESP and Bag filters of DRI	20	35	55	ESP dust used in Fly ash brick making & Bag filter dust used in low land filling
4.	Kiln Accretion	13.5	24	37.5	Will be used for road making
IV. Induction Furnace					
1.	Slag	16	30	46	Sold to cement manufacturers

Sl. No.	Description of Solid Waste	Quantity in TPD			Disposal Practice
		Existing	Proposed Expansion	Total	
2.	Dust from bag filters	1.6	3	4.6	Sent to pelletisation plant
V. Electric Arc Furnace					
1.	Slag	--	49	49	Filling low lying areas
2.	Bag Filter Dust	--	2.8	2.8	Sent to pelletisation plant
VI. Ferroalloy Plant					
1.	Slag from ferroalloy plant				
	Fe-Mn slag	221	110	331	Used as raw material for Si-Mn
	Si-Mn slag	182	91	273	Used as road construction material
	Fe-Si Slag	13	6.5	19.5	Used as road construction material
	Fe-Cr Slag	234	117	351	TCLP test shall be conducted. Subject to passing the test the slag will be used road base material. If it is hazardous it will be given to hazardous waste management.
2.	Dust from APC devices	0.6	0.4	1	Sold to brick manufacturers
VII. Captive Power Plant with WHRB and FBC Boilers					
1.	Fly Ash	66	282	348	Used in cement making
2.	Bottom Ash	9	31	40	Sold to fly ash brick manufacturers
VIII. Cement Grinding Plant					
1.	Dust from bag filters	--	15	15	Mixed with the product

Sl. No.	Description of Solid Waste	Quantity in TPD			Disposal Practice
		Existing	Proposed Expansion	Total	
2.	Sludge from neutralization pit		1 TPA	1 TPA	Impervious Pit
IX. Hazardous Wastes					
1.	Used Oil/Used Lubricants	0.2	1.0	1.2	Will be sold to authorized Re-processors
2.	DM Plant Resin	200 kg in 5 years	500 kg in 5 years	700 kg in 5 years	Will be disposed of in impervious pit
3.	Sludge from neutralization pit	0.2 T	0.5 T	0.7 T	Disposed of in impervious pit
4.	Waste Oil/Used Cotton Wastes	100 kg	500 kg	600 kg	Will be disposed of in impervious pit.

25.8.17 The Public hearing of the project was held on 29/11/2018. at the Sub-Divisional Office Raghunathpur in the district Purulia, under the chairmanship of Additional District Magistrate (G) at the Sub-Divisional Office, Raghunathpur, District Purulia, West Bengal. The issues raised during public hearing are concerning employment opportunity to local people and better up keep of environment. An amount of 142.5 Lakhs (0.75.% of Project cost) has been earmarked in order to address the issues raised during public hearing.

25.8.18 The capital cost of the project is Rs 190 Crores and the capital cost for environmental protection measures is proposed as Rs 962.5 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 95.0 Lakhs. The employment generation from the proposed expansion is 135 nos. direct and 1300 nos. indirect.

25.8.19 The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

EMP Measures	Capital Cost in Rs Lakhs	Annual Operating Cost in Rs Lakhs
Air pollution control	625	62.5
Waste water management	125	10.0
Sold waste management	50	6.0
Environmental monitoring	60	6.0
Occupational health	32.5	3.0
Safety & Disaster Management Plan	22.5	2.5
Green Belt Development.	35	3.5

EMP Measures	Capital Cost in Rs Lakhs	Annual Operating Cost in Rs Lakhs
EMS & Training	12.5	1.5
Total	962.5	95.0

- 25.8.20 Greenbelt will be developed in 14.17 ha. which is about 33% of the total acquired area. A 100 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/ MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 25,300 saplings will be planted and nurtured in 12.47 ha. in 1st, 2nd, 3rd and 4th year of expansion project.
- 25.8.21 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 25.8.22 Name of the EIA consultant: Centre for Envirotech & Management Consultancy Pvt. Ltd., Bhubaneswar [S.No. 89, List of ACOs with their Certificate / Extension Letter no. Rev. 4, Nov 10, 2020].

Observations of the Committee

- 25.8.23 The Committee noted the following:
- i. Interpretation of EB and SE data has not been carried out to predict the impact of project on these components in Chapter 4.
 - ii. Quantification of impacts and mitigation measures has not been carried out in Chapter 4.
 - iii. TOR point #9 has not been complied and presented in chapter 10.
 - iv. Engineering drawing to the scale has not been submitted.
 - v. Action plan for green belt development covering 33% of the plant area has not been submitted. Plantation may be completed in two years.
 - vi. Details of PGP capacity and treatment methodology for phenolic contaminated effluent has not been submitted.
 - vii. Commitment on percentage of employees from local community shall be indicated.
 - viii. CTO Compliance report from SPCB shall be furnished.
 - ix. Action plan for IOBP tailings handling has not been submitted.
 - x. Action plan for waste recycling and reduction measures has not been furnished.
 - xi. Design details of the SLF proposed inside the plant has not been submitted.
 - xii. EMP for Social and Infrastructure development activities shall be selected from SIA and Public consultation and these shall be in project mode as EMPs as per MoEF&CC Office Memorandum dated 30/09/2020.
 - xiii. PP may use ultralow NOx burner with three stage combustion, flue gas recirculation and auto combustion control system.

Recommendations of the Committee

- 25.8.24 In view of the above, the Committee, after detailed deliberations, recommended to return the proposal in its present form

25.9 Enhancement of Production capacity of existing Pellet Plant from 0.6 MTPA to 0.8 MTPA, upgradation of Existing 0.7 MTPA Iron Ore Grinding Unit to 1.0 MTPA Iron Ore Grinding and Beneficiation Plant, expansion by Adding: (i) Iron Ore Pellet Plant - 12,00,000 TPA (ii) 20 Nos Coal Gasifier - 54092 Nm³ /Hr (iii) Iron Ore Grinding & Beneficiation Plant - 20,00,000 TPA (iv). Ductile Iron Pipes with Induction Furnace – 4,00,000 TPA by **M/s. Sarda Energy and Minerals Limited** located at Phase1 of Siltara Industrial Growth Center, Village–Mandhar, Tehsil – Dharsiwa, **District Raipur, Chhattisgarh** – [Online Proposal No. IA/CG/IND/25977/2014, File No. J- 11011/45/2012-IA-II(I)] – **Reconsideration for grant of Environment Clearance based on ADS reply - regarding**

25.9.1 The salient features of the proposal cited above is given as below:

Details submitted by the project proponent

The Company proposes to establish only the following as per the revised proposal:

- A. Enhancement of the production capacity of Existing operational pellet plant from 6,00,000 TPA to 8,00,000 TPA without changing any plant & machinery.
- B. Upgradation of Existing 0.7 MTPA Iron Ore Grinding Unit to 1.0 MTPA Iron ore Grinding and Beneficiation Plant.
- C. Expansion by Adding:
 - Iron Ore Pellet Plant - 12,00,000 TPA
 - 20 Nos Coal Gasifier (20 Nos) - 54092 Nm³/Hr
 - Iron Ore Grinding & Beneficiation Plant - 20,00,000 TPA
 - Ductile Iron Pipes with Induction Furnace – 4,00,000 TPA

The detail of the ToR is furnished as below:

Date of application	Consideration	Details	Date of accord
27/11/2017	27 th meeting held on 3 rd to 4 th January 2018	J – 11011/45/2012-IA II (I)	16/01/2018 and its corrigendum dated 18/09/2018

The proposed expansion of Steel Plant of M/s. Sarda Energy and Minerals Limited is located at Phase 1 of Siltara Industrial Growth Center, Village – Mandhar, Tehsil Dharsiwa, District Raipur and State Chhattisgarh.

It is reported that the existing Pellet Plant was accorded environmental clearance vide F. No. J11011/45/2012-IA.II(I) dated 28/10/2016. Ministry of Environment, Forest & Climate Change accorded Environmental Clearance for 1.1 MTPA Integrated Steel Plant along with WHRB Power Plant (2 x 30 MW) at Siltara Industrial Growth Centre, Phase-I, Mandhar, Raipur, Chhattisgarh vide F. No. J-11011/999/2007-IA.II(I) dated 23/12/2008.

Consent to Operate for Pellet Plant was accorded by Chhattisgarh Environment Conservation Board vide 4616/TS/CECB/2009 (Water) & 4618/TS/CECB/2009 (Air) dated 15.09.2009 and Renewal of CTO granted vide 6522/TS/CECB/2017 (Water) & 6524/TS/CECB/2017 (Air) dated 15.03.2017 -validity of CTO is up to 30.09.2019. Further, Consent to Operate was renewed vide Lr. No8338 /TS/CECB/2019 dated 27 / 12 /2019 and consent is valid up to 30/09/2022.

The Production Capacity after Enhancement, Upgradation and Expansion as per the revised proposal:

S. no.	Project Details	Existing Capacity (TPA)	Capacity Enhancement / Upgradation/Proposed Capacity (TPA)	Total (TPA)
A Enhancement of Production capacity				
1	Iron Ore Pellet Plant	6,00,000	2,00,000 (Capacity Enhancement)	8,00,000
B Upgradation				
2	Iron Ore Grinding Unit	7,00,000		
	To Iron Ore Grinding & Beneficiation Plant		10,00,000 (Upgradation)	10,00,000
C Expansion				
3	Iron Ore Pellet Plant		12,00,000	12,00,000
4	Coal Gasifiers Plant (20 Nos)		54092 Nm ³ /Hr	54092 Nm ³ /Hr
5	Iron Ore Grinding & Beneficiation Plant		20,00,000	20,00,000
6	Ductile pipe with Induction furnace	-	4,00,000 (4x15 Ton)	4,00,000

The total land in possession of SEML is 204.452 ha. Out of total land 142.645 ha is government land and 61.807 ha is private land owned by SEML. No forestland is involved. No River passes through the project area. It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

The topography of the area is flat and reported to lies between 21°21'39.80" North to 21°21'14.61" North Latitude, and 81°40'58.13"East to 81°40'58.80"East Longitude in Survey of India topo sheet No. 64G/11, 64G/15 at an elevation of 282 m AMSL. The ground water table reported to ranges between 3.8 to 7.2m bgl below the land surface during the post-monsoon season and 10.5 to 5.2m bgl below the land surface during the pre-monsoon season.

No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the study area of the project. Fauna reported in the study area of *Mandharis Pavocristatus* i.e. Common Peafowl or Peacock. The authenticated list of flora and fauna by DFO, Raipur Division, Raipur reporting Peacock schedule-I fauna in the study area is provided by PP in EIA report. PP has submitted the conservation plan approved vide letter dated 29/05/2020 by PCCF & Wildlife Warden.

The details of the raw material requirement are given as below:

Sl. No.	Unit Name	Name	Source	Road Distance	Qty (TPD)	Rail	Road	No pf trucks per day
1	Iron Ore Beneficiation Plant	Iron Ore Fines	E-auction/Captive Iron Ore Mines/Private miners at Odisha	105 KM	10,000.00	8000	2,000.00	50
2	Iron Ore Pellet Plant	Iron Ore Concentrate	Local Market	12 KM	1400.00		1400.00	35
3		Bentonite/Lime	M.P & Rajasthan		100.00		100.00	3
4		Coal	E-Auction/Market/SECL's Dipika Gewra Mines	302 KM	80.00	64	16.00	1
5		Coal for Gasifiers (Alternative Fuel for Pellet Plant)	E-Auction/Market/SECL's Dipika Gewra Mines	302 KM	945.00	756	189.00	5
6	Ductile Iron Pipe with Induction Furnace	Pig Iron	Local Market/ SAIL	55 KM	1080.29		1080.29	28
7		Scrap steel	Local Market	12 Km	135.85		135.85	4
8		Cement	Local Market	12 Km	118.89		118.89	3
9		Core Sand	Local Market	12 Km	57.07		57.07	2
10		Cement Sand	Local Market	12 Km	33.88		33.88	1
Total No of trucks required								132

Impact on Vehicular Traffic Load due to proposed expansion

Traffic load (Baseline) : 31050 PCU/day

Total Traffic load during operation of existing and proposed expansion : 31187 PCU/day

Traffic survey data indicate that the existing road connecting to project site is catering to average density of traffic and that expected incremental increase in road traffic due to proposed expansion project. The incremental traffic due to expansion project would not exceed 3 trucks per day and would no significant changes on the traffic load situation at project site road. Total % of the load on the road due to the proposed expansion will be only 1.3%. Hence there will be very low impact on the traffic load due to the proposed expansion project.

The water requirement of the project is estimated as 7283m³ /day, out of which 7203m³/day will be fresh water requirement. The permission for drawl of groundwater is obtained from CGWA vide Lr. No. CGWA/NOC/IND/ORIG/2019/4739 dated 26th February 2019 for 7300 m³/day. The company has an agreement for supply of 45,600 KL/day water with Chhattisgarh Ispat Bhoomi Limited for its industrial use for post expansion requirement vide agreement dated 3rd July 2019.

The power requirement of the project will be 64.29.MW which will be sourced from the CSPDCL.

Baseline Environmental Studies

Period	February to May 2018
AAQ parameters at eight locations	PM _{2.5} = 24.8 to 46.7 µg/m ³ PM ₁₀ = 41.6 µg/m ³ to 90.8 µg/m ³ SO ₂ = 11.3 to 38.1 µg/m ³ NO _x = 19.2 to 44.7 µg/m ³
AAQ modelling	PM ₁₀ = 3.19 µg/m ³ SO ₂ = 8.53 µg/m ³ NO _x = 4.84 µg/m ³
Ground water quality at eight locations	pH: 7.1 to 7.7, Total Hardness: 219 to 420 mg/l, Chlorides: 42.5 to 187.8 mg/l, Fluoride: 0.3 to 0.7 mg/l. Heavy metals are within the limit
Surface water quality at six locations	pH: 7.1 to 7.9 ; DO: 5.4 to 6.4 mg/l and BOD: 1.0 to 2.0 mg/l and COD from <4 to 8.9 mg/l
Noise levels	39.8 to 60.8 dBA for daytime and 38.2 to 48.7 dBA for nighttime.

It has been reported that there is no rehabilitation and resettlement required.

The Solid wastes generation from existing, expansion proposals along with its utilization is given as below:

Sl. No	Plant	Waste Type	Quantity (TPA)	Mode of Disposal/Utilization
1	Iron Ore Pellet Plant (Enhancement)	ESP/Bag filter Dust	19,200	Recycle as a raw material for respective plant
2	Coal Gasifiers Plant (Underway)	Ash (as Cinder)	48,900	Will be crushed with slag crusher and utilized in Fly ash bricks, blocks and tiles manufacturing plant and also sold in the market
3		Tar	2,600	Will be Sold to the market to Authorized Vendors
4	Iron Ore Grinding & Beneficiation Plant (Upgradation)	Tailing	3,00,000	Will be used for making bricks Blocks, Tiles, Pavers, etc and sold to Cement Plant.
Proposed Project				
5	Iron Ore Beneficiation Plant	Tailing	600000	Will be used for making bricks Blocks, Tiles, Pavers, etc and sold to Cement Plant.
6	Iron Ore Pellet Plant	ESP/Bag filter Dust	28800	Recycle as a raw material for respective plant
7	Coal Gasifiers Plant	Ash (as Cinder)	97,800	Will be crushed with slag crusher and utilized in Fly ash bricks, blocks and tiles manufacturing

Sl. No	Plant	Waste Type	Quantity (TPA)	Mode of Disposal/Utilization
				plant and also sold in the market.
8		Tar	5,200	Will be Sold to the market to Authorized Vendors
9	Ductile Iron Pipe with Induction Furnace	Furnace Recycled scrap	16275	Will be recycled in back in process
10		Convertor Slag	3084	Will be utilized for Road making and filling of low lying areas.
11		IF Slag	1782	Will be Crushed With slag Crusher for recovery of metal and nonmetallic slag will be utilized in Fly ash bricks,
12		Waste	26861	Blocks and Tiles Manufacturing Plant and also sold in local market
13		Recycled material	735	Will be recycled in back in process

The Public hearing of the project was held on 10th January 2019 at Kundrapara, Gram Panchay at Mandhar, Raipur under the chairmanship of Additional District Magistrate for the proposed expansion project. The issues raised during public hearing are employment, water facilities in nearby villages, construction of community hall, toilet at Government school and training camp for youths. An amount of Rs. 915 Lakhs has been earmarked for public hearing issues.

The permanent employment is reported for 1165 people.

The capital cost of the project is Rs. 818.66 Cr and the capital cost for environmental protection measures is estimated as Rs. 29.64 Cr. The annual recurring cost towards the environmental protection measures is proposed as Rs. 5.50 Cr/annum.

The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

Particulars	Capital Cost (INR Lac)	Recurring Cost (INR Lac)
Air pollution Control System	2007	401.30
Wastewater Treatment System	300	45.00
Solid Waste Management	200	40.00
Green Belt Development	158	31.58
Environment Monitoring	100	30.00
Rain water harvesting project	200	2.00
Total	2964	549.88

Greenbelt will be developed in 81 ha which is about 40 % of the total area. Green belt will be developed as per CPCB/MoEF&CC, New Delhi guidelines. SEML will take-up massive green belt development by planting about 2500 trees per ha developing extensive green belt. The total Plantation done is 97250 No of Saplings i.e. an area of around 64.83 ha with plantation density of about 1500 trees per ha. SEML has planned to plant another 1,05,250 Nos of Saplings including 64825 nos in the existing developed greenbelt area of 64.83 ha as

gap plantation to increase the plantation density from 1500 Nos of Saplings /ha to 2500 Nos of Saplings /ha.

The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

Name of the EIA consultant: Pollution and Ecology Control Services [S.No. 74, List of ACOs with their Certificate / Extension Letter no. Rev. 02, Sep. 07, 2020].

Certified compliance report from Regional Office

The Status of compliance of earlier EC was obtained from Regional Office, Nagpur vide Lr. No. EC-295/RON/2017-NGP/3778, dated 2nd June 2018. There are no non-compliances reported by Regional officer. The closure report was obtained from Regional Office, Nagpur vide Lr. No. EC-295/RON/2017-NGP/5095, dated 10th July 2019.

- 25.9.2 M/s. Sarda Energy and Minerals Limited has made online application vide proposal no. IA/CG/IND/101936/2020 dated 2/07/2020. The proposal was considered in 21st meeting of EAC (Industry- I) held on 30th July, 2020 wherein Committee observed the following:

Observations of the Committee during meeting held on 30th July, 2020 -1st August, 2020:

- i. The project site is located in a critically polluted area namely Siltara Industrial Area having CEPI score of 79.94.
- ii. EIA report is not in line with Appendix III of EIA Notification 2006. There are 11 chapters in the report. Chapter 1 has 18 pages and carries information that is not relevant.
- iii. All relevant information that is to be used as knowledge and should be in different chapters of EIA report has been given in Annexures like TOR compliance in Annexure XIII; TOR 9 compliance. Noncompliance and ATRs etc.
- iv. ESPs have been designed for PM emission of 50 Mg/Nm³ (pdf page 122)
- v. Details of Blast Furnace configuration with respect to environmental considerations have not been furnished (page 132).
- vi. Power generation details from Non Recovery oven have not been given.
- vii. Environment and energy conservation issues of 90 T EAF not available (Page140).
- viii. Pollution control facilities in coke oven not provided (Page 120)
- ix. AAQ values are high at several places. No explanation given.
- x. BOD values in Surface water reported is 1.1, 1.4 and 1.5 (Page 193) which fall in not detection limit (NDL).
- xi. Noise has been measured at 9 KM from plant.
- xii. Organic matter in Soil is 0.3 % which seems to be low for land classification in Siltara Area.
- xiii. SIA study reported at page 279 is not as per the norms.
- xiv. Hazard Identification and Risk Assessment is not project specific.
- xv. RWH harvesting details with respect to how many days of consumption is recharges is not available.
- xvi. CER Activities have not been taken from public consultation proceeds and SIA outcomes. CER calculations are wrong. The activities proposed in the table are not CER as per MoEF&CC O.M. dated 1/05/2018.
- xvii. Only 1500 trees per ha are considered for plantation against 2500 desired.
- xviii. Project proponent and the consultant has not considered the following State Government notifications regarding ban on coal-based industries in Siltara area.

Industry & Commerce Dept. Govt. of Chhattisgarh	Implication / Operative Part of the order
Order No.& Date	
783/205/07 dated 16/03/2007	Ban on establishment of new sponge iron plant and coal based power plant in Urla, Siltara and Borjhara area of Raipur District till further orders.
3529/205/05/11/(E) dated 12/12/2007	Ban on diversification (involving use of coal as fuel or raw material) of the existing industries of above industrial areas
F2044/2012/11/8 dated 15/05/2012	Establishment of Coal Gasifier and Coal Gasifier Based Industries are permitted

- xix. In the presentation made in the EAC meeting, PP has incorporated several changes in the scope from that described in TOR. These changes required TOR amendment in advance and a revised EIA in line with revised TOR. These changes were not intimated to MOEF&CC by PP nor indicated in EIA report. Further, the consultant changed the presentation which was circulated to the Ministry and EAC members without prior notice.
- xx. The committee felt that EIA/EMP report submitted by M/s. PECS is not in line with the of Appendix III of EIA Notification 2006. The information which are essential for due diligence by the EAC has been given in Annexures. There is a lot of repetition of data and text in several chapters. Earlier also, EAC has raised concern on such similar issue with the same consultant on several occasions wherein EAC advised MoEF&CC to refer the matter to QCI/NABET, in case of no improvement from the consultant. Therefore, EAC advised MoEF&CC to refer the matter to QCI/NABET as the consultant is repeatedly exhibits no improvement in the quality of EIA/EMP prepared by them.

Recommendations of the Committee during meeting held on 30th July, 2020 -1st August, 2020:

In view of the foregoing and after deliberations, **the Committee recommended to return the proposal in present form.** Further, the Committee also recommended to refer the matter to QCI/NABET for taking appropriate action against M/s. Pollution and Ecology Control Services in respect of metallurgical industries as the consultant is consistently not improving the quality of the EIA/EMP report.

- 25.9.3 In view of the aforementioned observation of the EAC during the meeting and orders dated 16.03.2007, 12.12.2007 and 15.05.2012 of Industry & Commerce Dept. Government of Chhattisgarh, PP submitted that the company intends to partially withdraw its proposal by dropping all the projects utilizing coal as fuel or raw material except Coal Gasifiers and Coal Gasifier based projects. Accordingly, revised proposed was submitted vide proposal no. IA/CG/IND/25977/2014 dated 11/09/2020. The company has revised its proposal titled as *“Enhancement of Production capacity of existing Pellet Plant from 0.6 MTPA to 0.8 MTPA; Upgradation of Existing 0.7 MTPA Iron Ore Grinding Unit to 1.0 MTPA Iron Ore Grinding & Beneficiation Plant and Expansion by adding: 1.2 MTPA Iron Ore pellet Plant along with Coal Gasifiers, 2.0 MTPA Iron Ore Grinding & Beneficiation Plant and 0.4 MTPA Ductile Iron Pipe with Induction Furnace.”*

25.9.4 The revised proposal was considered by the EAC in its 23rd meeting held during 28-30th September, 2020.

Observations of the Committee held during 28-30th September, 2020

The Committee observed the following:

- i. EMPs have not been quantified. PP shall furnish a list of EMPs with their specifications, implementation schedule, Budget and post monitoring plan for each EMP.
- ii. PP shall provide details of APCDs with each stack along with specification of the devices.
- iii. Review of water requirement considering minimal abstraction of ground water. Revised water balance shall be furnished.
- iv. Tailing pond for IOBP shall not be permitted. Tailings are to be dewatered and disposed dry.
- v. Detailed arrangement for ash disposal shall be submitted.
- vi. 40% green belt details considering 50 m wide green belt between the plant and the village on NE side of the plant boundary. Installation of DI pipe in this part of the plot shall be avoided.
- vii. PM in stack emission shall not exceed 30 mg/Nm³.
- viii. Coal Gasifier shall be closed circuit type and Phenolic water shall be treated in ETP for recycling back in process. No transportation of phenolic water to units outside the plant premises is permitted.
- ix. ETP shall be installed to treat and recycle plant effluent water.
 - x. Tar sludge shall be mixed with coal and recycled to Coal Gasifier.
- xi. Zinc dross shall be collected in Zn coating area and Bag filter area and recycled to registered recyclers.
- xii. Zinc dust shall be monitored in AAQ in the plant premises.
- xiii. Bitumen Coating area shall be ventilated to remove odor and to avoid exposure of employees to carcinogenic tar fumes.

Recommendations of the Committee held during 28-30th September, 2020

In view of the foregoing and after deliberations, the Committee deferred the consideration and sought following additional information:

- i. PP shall furnish a revised project specific EMP with detailed and quantified specifications.
- ii. PP shall provide details of APCDs with each stack along with specification of the devices.
- iii. Review of water requirement considering minimal abstraction of ground water. Revised water balance shall be furnished.
- iv. Tailing pond for IOBP shall not be permitted. Tailings are to be dewatered and disposed dry.
- v. Detailed arrangement for ash disposal shall be submitted.
- vi. 40% green belt details considering 50 m wide green belt between the plant and the village on NE side of the plant boundary. Installation of DI pipe in this part of the plot shall be avoided.

- vii. PM in stack emission shall not exceed 30 mg/Nm³.
- viii. Coal Gasifier shall be closed circuit type and Phenolic water shall be treated in ETP for recycling back in process. No transportation of phenolic water to units outside the plant premises is permitted.
- ix. ETP shall be installed to treat and recycle plant effluent water.
 - x. Tar sludge shall be mixed with coal and recycled to Coal Gasifier.
 - xi. Zinc dross shall be collected in Zn coating area and Bag filter area and recycled to registered recyclers.
 - xii. Zinc dust shall be monitored in AAQ in the plant premises.
 - xiii. Bitumen Coating area shall be ventilated to remove odor and to avoid exposure of employees to carcinogenic tar fumes.

In addition to the above, the Committee also recommended that MoEF&CC may issue show cause notice to M/s. Pollution and Ecology Control Services, Nagpur for blacklisting from participation in any EIA process in respect of Metallurgical Industries as they have consistently not improved the quality of the EIA report despite repeated warnings given by the EAC and show cause issued by QCI/NABET. MoEF&CC has earlier also written to NABET about the M/s. PECS, Nagpur in this instant case as well.

25.9.5 In view of above, PP has submitted the reply to the above ADS through PARIVESH on 13/11/2020 and the same was placed before the EAC on 26/11/2020. The reply submitted by the proponent are summarized as below:

- i. ***PP shall furnish a revised project specific EMP with detailed and quantified specifications.***

Reply: The total Project cost (Existing + Expansion) is Rs.818.66 Crores. Budgetary provision of Rs. 47,30Crores as a capital cost and Rs. 5.50 Crores as recurring cost per annum is reserved for implementation of Environmental Management Plan. The project specific revised EMP with detailed and quantified specifications is submitted by PP.

- ii. ***PP shall provide details of APCDs with each stack along with specification of the devices.***

Reply: The details of proposed and existing APCDs (Air Pollution Control devices) with each Stack is given as under:

S. No.	Unit Name	APCDs
1.	Enhancement of Pellet Plant	ESP (Presently 4 Fields) — Upgraded to achieved PM Emission of less than 30 mg/Nm ³ by: 1. By replacing Silicon Controlled Rectifier (SCR) with insulated Gate Bipolar Transistor (IGBT) based High Voltage (HV) power supply. 2. Increasing the collection area by providing an additional field or by increasing height of the present electrode. 3. Uniform distribution of dust load through Gas Distribution Tests.
2.	1.2 MTPA Pellet Plant	ESP (4 Fields with 1 additional dummy field)— Designed to Emission of less than 30 mg/Nm ³

S. No.	Unit Name	APCDs
3.	2x15 T Furnace Induction for Ductile Iron Pipe Plant	Swiveling Hood attached with Emission of less than 30 mg/Nm ³
4.	2x15 T Furnace Induction for Ductile Iron Pipe Plant	Swiveling Hood attached with Emission of less than 30 mg/Nm ³

- iii. ***Review of water requirement considering minimal abstraction of ground water. Revised water balance shall be furnished.***

Reply: The revised water balance given hereunder:

S. No	Plant Name	Water Requirement	System/ Evaporation loss	Consumption	Waste water Generation
1	Iron Ore Pellet Plant (Enhancement)	250	185	65	-
2	Coal Gasifiers Plant (Underway)	291	158	111	22
3	Iron Ore Grinding & Beneficiation Plant (Upgradation)	1,061	866	195	-
4	Iron Ore Pellet Plant	400	296	104	-
5	Coal Gasifiers Plant	582	316	222	44
6	Iron Ore Grinding & Beneficiation Plant	2,122	1,732	390	-
7	Ductile Iron Pipe with Induction Furnace	2,462	-	2,462	-
8	Domestic	35	-	9	26
8a	Domestic - Drinking	6	-	2	4
8b	Domestic - Sanitation	29	-	7	22
9	Green Belt Development	40	-	40	-
10	Dust Suppression	40	-	40	-
	Total	7,318	3,553	3,647	118

The total Domestic water requirement is 35 KLD. It was proposed that the ground water would be drawn for drinking purpose i.e 20 KLD out of 35 KLD. As per the directions of the Hon'ble EAC, P has stated that they have reviewed the fresh ground water requirement, by revising 20 KLD drinking water requirement as 6 KLD.

In view of the above the ground water extraction will be reduced from the existing approved quantity of 7300 cu.m/year to 2160 cu.m/year (Total reduction of 5140 cu.m/year of Ground water Drawl).

- iv. ***Tailing pond for IOBP shall not be permitted. Tailings are to be dewatered and disposed dry.***

Reply: PP has submitted that they have proposed installation of Tailing Pressure Filters instead of dumping the tailing slurry to Tailing Pond. Tailing slurry contains 50 to 60 % moisture which gets reduced to below 20 % by installing the Tailing filter press. The de-watered Tailings will be stored in a Tailing Yard admeasuring an area of 6 Ha.

- v. ***Detailed arrangement for ash disposal shall be submitted.***

Reply: PP has reported that Ash (as Cinder) will only be generated from the Proposed Coal Gasifier Plant. Ash will be crushed in the proposed Slag Crusher and will be utilized as Raw Material in our captive operational Fly Ash Brick Block & Tiles Manufacturing Plant and partly can also be sold in the local market.

- vi. ***40% green belt details considering 50 m wide green belt between the plant and the village on NE side of the plant boundary. Installation of DI pipe in this part of the plot shall be avoided.***

Reply: PP has submitted that in order to develop 50 m wide green belt in the NE side of the plant boundary, they have revised the area earmarked for greenbelt development by increasing 1.241 Ha. in the NE side. The minimum width of Greenbelt in the NE side of the plant boundary will now be more than 50 m. The total area earmarked for greenbelt development will increase from 81.0 Ha. to 82.241 Ha. Accordingly, PP has submitted the revised green development plan. Further the proposed location of the Ductile Iron Pipe Plant has also been shifted to the center of the premises. The revised plot plan is submitted.

- vii. ***PM in stack emission shall not exceed 30 mg/Nm³.***

Reply: PP has confirmed that the stack emission shall not exceed 30 mg/Nm³, all the APCDs will be designed to achieve stack emission of PM less than 30 mg/Nm³. Further it has been submitted that the ESP of the existing Pellet Plant will be upgraded to control the stack emission of PM less than 30 mg/Nm³. The details of APCDs, are in the revised EMP.

- viii. ***Coal Gasifier shall be closed circuit type and Phenolic water shall be treated in ETP for recycling back in process. No transportation of phenolic water to units outside the plant premises is permitted.***

Reply: PP has confirmed that the Coal Gasifier will be of closed circuit type. Further in view of the recommendations of the Hon'ble EAC, PP has proposed to install ETP with Phenol Removal System for treatment of the Phenolic water. PP also assures that no Phenolic Water will be transported outside the plant premises. The details are in the revised EMP.

- ix. ***ETP shall be installed to treat and recycle plant effluent water.***

Reply: In view of the recommendation of the Hon'ble EAC, PP has proposed to install 80 KLD ETP for treatment of the 66 KLD waste water. The treated water will be reused for Plantation and Dust Suppression. The details for specification of the ETP are in the revised EMP.

- x. ***Tar sludge shall be mixed with coal and recycled to Coal Gasifier.***

Reply: PP has undertaken and confirmed that Tar sludge shall be mixed with coal and recycled to Coal Gasifier.

- xi. ***Zinc dross shall be collected in Zn coating area and Bag filter area and recycled to registered recyclers.***

Reply: PP has undertaken and confirmed that Zinc dross will be collected in Zn coating area and Bag filter area and recycled to registered recyclers.

xii. Zinc dust shall be monitored in AAQ in the plant premises.

Reply: PP has confirmed that Zinc dust will be monitored in AAQ in the plant premises.

xiii. Bitumen Coating area shall be ventilated to remove odor and to avoid exposure of employees to carcinogenic tar fumes.

Reply: PP has confirmed that Bitumen Coating area will be ventilated to remove odor and to avoid exposure of employees to carcinogenic tar fumes. In bituminous coating area, the fumes are taken into duct through hood and passed through water scrubber.

Observations of the Committee

25.9.6 The Committee observed the following:

- i. The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data and incremental GLC due to the proposed project within NAAQ standards. The Committee has also deliberated on the public hearing issues along with action plan to address the issues raised during the public hearing and found satisfactory. The certified compliance report also found to be satisfactory.
- ii. Additional information submitted by the project proponent found to be satisfactory, and addressing the concerns of the Committee except the rain water harvesting.

Recommendations of the Committee

25.9.7 In view of the foregoing and after deliberations the committee recommended the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 in supersession of all the existing ECs subject to the following specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 pertaining to pellet plants, induction furnace and rolling mills based on project specific requirements:

A. Specific conditions

- i. 40% green belt shall be developed. 50 m wide green belt shall be developed between plant and the village on NE Side of the plant boundary. Plantation shall be completed in 2 years.
- ii. Particulate matter emission level from stacks shall not exceed 30 mg/Nm³.
- iii. Coal gasifier shall be closed circuit type and phenolic water tar sludge generated at PGP shall be treated/used within the plant premises.
- iv. Rolling mill waste water shall be treated in a suitably designed ETP that consists of oil separator, sedimentation thickener and sludge filter.
- v. PP shall use PTFE Coated bags in all bag houses.
- vi. IOBP tailings shall be dewatered and disposed dry. Tailing pond is not permitted.
- vii. Zinc dust shall be monitored in AAQ at plant site twice a month.
- viii. Bitumen coating section shall be well ventilated to reduce exposure to carcinogenic bitumen fumes.
- ix. Plant roads shall be paved and industrial vacuum cleaners shall be used to clean the roads regularly to reduce fugitive emission.

B. General conditions

I. Statutory compliance:

- i. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- iii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- iv. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- v. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
- vi. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.
- vii. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.
- viii. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
- ix. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (applicable to pellet plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. Adhere to 'Zero Liquid Discharge'.
- iv. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- v. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

IV. Noise monitoring and prevention

- i. Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation And Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

V. Energy Conservation measures

- i. Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.

VI. Waste management

- i. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.
- ii. Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried, and briquetted and reused in melting Furnaces.
- iii. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

- i. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

VIII. Public hearing and Human health issues

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

IX. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020.
- ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters,

indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
 - vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
 - vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
 - viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
 - ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
 - x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
 - xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
 - xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
 - xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
 - xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
- 25.10 1.2 MTPA Integrated Steel Plant with 225 MW CPP - change in configuration, production capacity & product mix of the project - Reduction in Blast Furnace from 1.0 MTPA (2 x 550 m³) to 0.6 MTPA (1 x 550 m³), Sinter Plant from 1.0 MTPA (1 x 175m²) to 0.6 MTPA (1 x 70 m²), Ferro Alloy Plant from 0.12 MTPA (10 x 9 MVA) to 0.048 MTPA (4 x 9 MVA) & CFBC (Coal Dolochar based CPP) 135 MW (3 x 45 MW) to 90 MW (2 x 45 MW); Expansion of DRI from 0.5 MTPA (2 x 500 + 2 x 350 TPD) to 1.2 MTPA (6 x 600 TPD) with DRI based WHRB from 54 MW to 102 MW making total capacity of CPP- 228 MW, change in configuration of Pellet Plant from 2.4 MTPA (2 x 1.2 MTPA) to 1 x 2.40 MTPA

and change in product mix (production of DI fitting & accessories with DI Pipe) within EC approved capacity of Ductile Iron Pipe (0.2 MTPA), keeping steel melting shop with CCM and oxygen optimized furnace, rolling mill, coke oven plant, oxygen plant, lime & dolomite plant, iron ore beneficiation & producer gas plant **by M/s. Rashmi Alloy Steel Private Limited** located at Village-Gokulpur, P.O-Shyamraipur, P.S.-Kharagpur (Local) **District West Medinipur, West Bengal** – [Online Proposal No. IA/WB/IND/166364/2020, File No. J-11011/169/2017-IA-II(I)] –**Environment Clearance under para 7(ii) of EIA, 2006 - regarding.**

- 25.10.1 **M/s. Rashmi Alloy Steel Private Limited** has made an online application vide proposal no. IA/WB/IND/166364/2020 dated 17/11/2020 along with Form 1 & 2, and feasibility report seeking Environment Clearance (EC) under para 7(ii) of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the project is appraised at the Central level.

Details submitted by the project proponent

- 25.10.2 The plant had obtained Environmental Clearance from MoEF&CC in the name of M/s Orissa Metaliks Private Limited (OMPL) vide File No. - J-11011/169/2017-IA-(II), dated 03/04/2019 which was transferred to M/s Rashmi Alloy Steel Private Limited (RASPL) vide File No. - J-11011/169/2017-IA-(II) dated 28.01.2020. CTO was issued by WBPCB vide Co-No-128946, memo no 229-hl-co-r/19/0526 dated 29.05.2020 for 02 x 9 MVA Ferro Alloy Plant
- 25.10.3 The present status of implementation of the existing Environmental Clearances:

Sl. No.	Units	As per EC		Status of Implementation
		Configuration	Capacity	
1	Blast Furnace	2x550 m ³	1.0 MTPA	Not Yet Implemented
2	Sinter	1x175 m ²	1.0 MTPA	Not Yet Implemented
3	DRI	2x500 TPD + 2x350 TPD	0.5 MTPA	2 x 500 TPD DRI Civil foundation completed and mounting of kiln, machineries going on. For 2 x 350 TPD DRI kiln civil foundation works going on.
4	SMS with LRF,CCM and oxygen optimized furnace	10x20 T EIF + 2x50 T EAF	1.0 MTPA	Not Yet Implemented
5	Ferro Alloy Plant	10x9 MVA	0.12 MTPA	2 x 9 MVA under operation
6	Fe-Cr Briquette Manufacturing plant	1x40 TPH	40 TPH	Not Yet Implemented
7	Non-recovery type Coke Oven Plant	2x0.25 MTPA	0.5 MTPA	Not Yet Implemented
8	Lime Dolomite Plant	1x200 TPD	200 TPD	Not Yet Implemented
9	Oxygen Plant	1x200 TPD	200 TPD	Not Yet Implemented
10	Hot Rolling Mill	**	0.6 MTPA	Not Yet Implemented

Sl. No.	Units	As per EC		Status of Implementation
		Configuration	Capacity	
11	Cold Rolling Plant with Pickling Line & Continuous Galvanizing	***	0.35 MTPA	Not Yet Implemented
12	Ductile Iron Pipe Unit, Fitting & Accessories	**	0.2 MTPA	Not Yet Implemented
13	Captive Power Plant	WHRB Based 90 MW (54 MW from DRI Plant+ 34 MW from Coke Oven Plant + 2 MW from EAF + CFBC) Coal & Dolochar Mix based 3 x 45 MW	225 MW	WHRB (DRI) under Construction
14	Pellet Plant	2 x 1.2 MTPA	2.4 MTPA	Civil works started
15	I/O Beneficiation Plant	2 x 1.2 MTPA	2.4 MTPA	Not Yet Implemented
16	Producer Gas Plant	20 x 7,500 Nm ³ /hr	1,50,000	Not Yet Implemented

25.10.4 Regional Office of the MoEF&CC visited the plant site on 08/02/2020 and issued some non-compliances vide letter dated 03/06/2020 to the project proponent for taking corrective measures. Subsequently, the Project Proponent have submitted Action Taken Report (ATR) vide their letter dated 16/06/2020. Action Taken Report was examined and the report was furnished by the RO on 15/09/2020 and 25/11/2020. As per report, PP has taken corrective action on the observations of RO.

25.10.5 The present proposal is for seeking Environment Clearance under the provisions of para 7(ii) of EIA Notification, 2006. The proposed changes are furnished as below:

Sl. No.	Units	As per EC		Proposed change		Ultimate Configuration	
		Configuration	Capacity	Configuration	Capacity	Configuration	Capacity
1	Blast Furnace	2x550 m ³	1.0 MTPA	Surrender 1 module of MBF	(-)0.40 MTPA	1x550 m ³	0.60 MTPA
2	Sinter	1x175 m ²	1.0 MTPA	Scaling down the sinter capacity	(-) 0.40 MTPA	1x70 m ²	0.60 MTPA
3	DRI	2x500 TPD + 2x350 TPD	0.5 MTPA	Changing configuration and installing two additional kilns	(+) 0.70 MTPA	6x600 TPD	1.2 MTPA

Sl. No.	Units	As per EC		Proposed change		Ultimate Configuration	
		Configuration	Capacity	Configuration	Capacity	Configuration	Capacity
4	SMS with LRF,CCM and oxygen optimized furnace	10x20 T EIF + 2x50 T EAF	1.0 MTPA	No change		10x20 T EIF + 2x50 T EAF	1.0 MTPA
5	Ferro Alloy Plant	10x9 MVA	0.12 MTPA	Surrendering 6 no of SAF	(-) 0.072 MTPA	4x9 MVA	0.048 MTPA
6	Fe-Cr Briquette Manufacturing plant	1x40 TPH	40 TPH	No change		1x40 TPH	40 TPH
7	Non-recovery type Coke Oven Plant	2x0.25 MTPA	0.5 MTPA	No change		2x0.25 MTPA	0.5 MTPA
8	Lime Dolomite Plant	1x200 TPD	200 TPD	No change		1x200 TPD	200 TPD
9	Oxygen Plant	1x200 TPD	200 TPD	No change		1x200 TPD	200 TPD
10	Hot Rolling Mill	**	0.6 MTPA	No change		**	0.6 MTPA
11	Cold Rolling Plant with Pickling Line & Continuous Galvanizing	***	0.35 MTPA	No change		***	0.35 MTPA
12	Ductile Iron Pipe Unit, Fitting & Accessories	**	0.2 MTPA	No change		**	0.2 MTPA
13	Captive Power Plant	WHRB Based 90 MW (54 MW from DRI Plant+ 34 MW from Coke Oven Plant + 2 MW from EAF + CFBC (Coal & Dolochar Mix based) 3 x 45 MW]	225 MW	Increase in WHRB Based CPP and surrendering 1 No CFBC (Coal & Dolochar Mix based) CPP	(+)48 MW (from WHRB-DRI), based CPP and (-) 45 MW CFBC based CPP	WHRB Based 138 MW (102 MW from DRI Plant) + 34 MW from Coke Oven Plant + 2 MW from EAF+ CFBC (Coal & Dolochar Mix based) 2 x 45 MW]	228 MW
14	Pellet Plant	2x1.2 MTPA	2.4 MTPA	Change in configuration	No change in Production capacity	1x2.40 MTPA	2.40 MTPA
15	I/O Beneficiation Plant	2x1.2 MTPA	2.4 MTPA	No change		2x1.2 MTPA	2.4 MTPA
16	Producer Gas Plant	20 x 7,500 Nm ³ /hr	1,50,000	No change		20 x 7,500 Nm ³ /hr	1,50,000

25.10.6 The location of plant for the existing 1.2 Million Ton Per Annum Integrated Steel Plant along with 225 MW (90 MW WHRB based & 3 x 45 MW Coal and Dolochar mix based) Captive

Power Plant is at Mouza – Nandarchalk (J.L. No. 124), Bargai (J.L No. 197) & Kanjarichak (J.L. No-129) at Village – Gokulpur, P.O – Shyamraipur, P.S – Kharagpur (L), Dist. Paschim Medinipur in the state of West Bengal.

- 25.10.7 PP has reported that there will not be any change in Plant area of 310 acres (125.45 hectares). Raw material will be reduced from 7,661,898 TPA to 6,837,648 TPA. Water requirement will be reduced from 22,248 KLD to 17,040 KLD. Power will be reduced from 334.8 MW to 267.3 MW.
- 25.10.8 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to for corridor for Schedule-I fauna. No schedule-I fauna is found the study area.
- 25.10.9 PP has reported that One-month data was monitored in December, 2019. P₉₈ values of PM₁₀ lies in the interval 70.1 – 82.3 µg/m³, PM_{2.5} lies in the interval 13 – 42 µg/m³, SO₂ lies in the interval 10 – 15 µg/m³ and NO_x lies in the interval 19 – 27 µg/m³. All other monitored data are within the limits.
- 25.10.10 The pollution load assessment is given below:

Sl. No.	Component	As per Existing EC	Revised value based on change in configuration	Remarks
1	Air Emissions	PM - 13.58 g/s SO ₂ - 19.10 g/s NO _x - 14.50 g/s	PM - 13.63 g/s (+0.05 g/s) SO ₂ - 18.06 g/s (-1.04 g/s) NO _x - 15.59 g/s (+1.09 g/s)	There is a marginal increase in pollution load with respect to PM and NO _x whereas SO ₂ load has decreased by 1.04 g/s.
2	Waste water generation	Industrial waste water - 56 m ³ /hr	Industrial waste water - 48 m ³ /hr (-8 m ³ /hr)	There would be a decrease in waste water generation and the plant would continue to operate on Zero Effluent Discharge principle.
3	Solid Waste generation	2,533,473 TPA	2,389,089 TPA (-144,384 TPA)	There is an overall decrease in solid waste generation.
4	No of Trucks/hr	52	47 (-5)	No of trucks decreases as raw material consumption is less.
5	Make up water requirement	22,248 KLD	17,040 KLD (-5,208 KLD)	There is a net decrease in makeup water requirement.
6	Power requirement	334.8 MW	267.3 MW (- 67.5 MW)	There is a significant decrease in power demand.
7	Raw material consumption	7,661,898 TPA	6,837,648 TPA (-824,250 TPA)	Raw material consumption is decreased.
8	Land use	125.45 ha Greenbelt (%) - 33%	125.45 ha (0) Greenbelt (%) - 35.0% (+2.0%)	The overall land requirement is same.

- 25.10.11 PP has reported that there is a marginal increase in pollution load with respect to PM and NO_x, the overall impact due to the revised configuration is significantly reduced with respect to waste generation and resource requirement. Moreover, marginal increase in air pollution will be off-setted by increase in greenbelt by 2.0%. The annual cost for environmental monitoring including maintenance of green belt would be Rs. 1.9 crore.
- 25.10.12 There is no additional investment in the proposed project; The capital cost for the proposed project is remain same i.e. 1700 crore
- 25.10.13 The total green area is 72 ha, which is 36% of the total area. It is reported that the green belt equivalent to 33% of the plot area has been developed. Total 493594 trees have been planted till date.
- 25.10.14 The proponent has mentioned that there is no court case or violation under EIAs Notification to the project or related activity.
- 25.10.15 Show cause Notice (SCN) issued by MoEF&CC vide letter no. J-11011/604/2010-IA. II(I) dated 21/09/2020 to all the group companies of M/s. Rashmi Group located at Paschim Medinipur in the state of West Bengal. Reply to SCN was submitted to MoEFCC, New Delhi vide letter no-RASPL/Reply/20-21/03 dated 29.10.2020.
- 25.10.16 Name of consultant: M/s. M. N. Dastur & Co (P) Ltd [S.No.169, List of ACOs with their Certificate / Extension Letter no. Rev. 4, Nov 10, 2020].

Observations of the Committee

- 25.10.17 The Committee noted the following:
- i. Instant proposal is for enhancement of DRI production from 0.5 to 1.2 MTPA by changes in configuration of existing DRI kiln (2x500 & 2x350 TPD to 4x600TPD) and also installation of two additional DRI kilns with a capacity of 2x600 TPD. Therefore, total increase in DRI kiln is from 1350 TPD to 3600 TPD.
 - ii. Instant proposal also involves surrender of one module of Blast Furnace, 6 Nos of Sub Merged Arc Furnace and scaling down the sinter plant capacity from 1.0 MTPA to 0.6 MTPA. Besides, the proposal also involves change in configuration pellet plant from 2x1.2 MTPA to 1x2.4 MTPA.
 - iii. Instant proposal involves change in process route from sinter/blast furnace to pellet/DRI for steel making. The resultant pollution load is increasing due to the addition of two DRI kilns of 600 TPD capacity.
 - iv. The Committee felt that PP should carry out the due diligence including preparation of Environment Impact Assessment and public consultation as prescribed under para 7(ii)a of EIA Notification, 2006.

Recommendations of the Committee

- 25.10.18 In view of the foregoing and after deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at Annexure-1 read with additional ToRs at Annexure-2 as per para 7(ii) a of EIA, 2006.
- i. The construction activities with respect to changes in configuration of existing DRI kiln (2x500 & 2x350 TPD to 4x600TPD) and also installation of two additional

DRI kilns with a capacity of 600 TPD each shall not be undertaken till EC is obtained.

- ii. Ground water abstraction shall be avoided.
- iii. Iron ore slimes shall be dewatered and disposed dry. Ponding of tailings shall not be permitted.
- iv. Effluent from coal gasifier shall be burnt in DRI and tar sludge shall be recycled to gasifier after mixing with coal.
- v. PM emission level from stacks shall not exceed 30 mg/Nm³.
- vi. Coal gasifier shall be closed circuit type and phenolic water tar sludge generated at PGP shall be treated/used within the plant premises.
- vii. Zinc dust shall be monitored in AAQ at plant site twice a month.
- viii. Plant roads shall be paved and industrial vacuum cleaners shall be used to clean the roads regularly to reduce fugitive emission.
- ix. PP shall use ultralow NOx burner with three stage combustion, flue gas recirculation and auto combustion control system.

25.11 Proposed installation of the Ferro Alloy Plant through setting up of 2x9 MVA Submerged Arc Furnaces for production of Ferro Manganese (18000 TPA) and Silico Manganese (12000 TPA) & Sinter Plant (9000 TPA) by **M/s Shyam Business Solution Pvt. Limited** located at Raturia, **Angadpur Industrial Area, Durgapur, West Bengal** [Online Proposal No. IA/WB/IND/166397/2020, File No. J- 11011/198/2020-IA.II (I)] – **Prescribing of Terms of Reference** - regarding.

25.11.1 The salient features of the proposal cited above is given as below:

Details submitted by the project proponent

M/s Shyam Business Solution Pvt. Limited, proposes to install a new Ferro Alloy Plant through setting up of 2x9 MVA Submerged Arc Furnaces for production of Ferro Manganese (18000 TPA) and Silico Manganese (12000 TPA) & Sinter Plant (9000 TPA). It is proposed to set up the plant for Production of Silico-Manganese & Ferro-Manganese based on smelting technology in SAF.

The proposed unit will be located at Raturia, Angadpur Industrial Area, Taluka: Durgapur, District: Paschim Barddhaman, State: West Bengal.

The land area acquired for the proposed plant is 2.26 ha or 22639 m². The total land area is industrial. No/forestland involved. The entire land has been acquired for the project. Of the total area 0.9 ha (40%) land will be used for green belt development.

No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.

Total project cost is approx. Rs. 45 Crores. Proposed employment generation from proposed project will be 128 direct employments.

The targeted production capacity of the Silico-Manganese is 12000 TPA and Ferro-Manganese is 18000 TPA and sinter 9000 TPA. The ore for the plant would be procured from South Africa, Australia, Odisha, Nagpur etc. The ore transportation will be done through Sea for import and Rail/Rake for indigenous. The proposed capacity for different products for new site area as below:

Name of unit	No. of units	Capacity of each Unit	Production Capacity (TPA)
Sub-merger Arc Furnace	2	9 MVA	Si-Mn: 12000 Fe-Mn: 18000
Sinter Plant	1	30 TPD	9000

The electricity load of 16 MVA will be procured from WBSEDCL. No DG set will be installed for proposed project.

Proposed raw material and fuel requirement for project are Manganese Ore, Dolomite, Coke, Quartz, Electrode paste & Ferro Manganese Slag (For Silico Manganese Production). The requirement would be fulfilled by indigenous sources as well as imported. Fuel consumption will be mainly electricity.

Raw Materials	Qty Required per month	Source	Mode of Transport	Storage Period	Storage Qty	Chemical Composition (%)
Manganese Ore	6360	Import from South Africa, Australia, Odissa, Nagpur etc.	Sea for Import and Road/Rake for Indigenous	10 days	2120	Mn:32 -48, Fe:3.5 -23, SIO ₂ : 5-25, CAO:10, MGO: 5
Dolomite	300	Indegenous from Bhutan,	By Road	10 days	100	CAO:35, MGO:16, SIO ₂ :5
Coke	1500	Indegenous from Assam, Vizag and Import from Australia, Vietnam	Sea for Import and Road/By Road for Indigenous	10 days	500	FC:82,Ash:5, VM:3
Quartz	600	Indigenous from Bankura, Purulia	By Road	10 days	200	SIO ₂ :98
Ferro Manganese Slag (For Silico Manganese Production)	1080	Captive Generation or Indigenous Purchase from Durgapur, Barjora	By Road	NA	0	MnO:30,Fe:1, SIO ₂ : 30, CAO:15, MGO: 10
Electrode paste	51	Bihar & West Bengal	By Road	10 days	17	--

Water Consumption for the proposed project will be 133 KLD (fresh water requirement 33 KLD and recycled water 100 KLD) and waste water generation will be 10 KLD (6 KLD industrial and 4 KLD domestic). Domestic waste water will be disposed through septic tank followed by soak pit and industrial waste water generated will be collected in guard pond and neutralized and reused for dust suppression and greenbelt.

The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

Name of the consultant: M/s Ultra-Tech (Environment Consultancy & Laboratory) [S.No. 85, List of ACOs with their Certificate / Extension Letter no. Rev. 4, Nov 10, 2020].

25.11.2 M/s Shyam Business Solution Pvt. Limited has made application vide online proposal no. IA/WB/IND/166397/2020 dated 10/09/2020 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

25.11.3 The aforesaid proposal was earlier considered in 23rd meeting of the Re-constituted EAC (Industry-I) held during 28-30th September, 2020.

Observation of the Committee during meeting held on 28-30th September, 2020

The Committee noted the following:

- i. The proposed land is in the industrial area having 2.26 ha with green belt to be developed in an area of 0.753 ha.
- ii. The project cost is Rs. 75.00 Cr.
- iii. 45 KLD make up water shall be made available by Durgapur Municipal Corp. iv. The land earmarked for the proposed project is inadequate.

Recommendation of the Committee during meeting held on 28-30th September, 2020

In view of the foregoing and after deliberations, the Committee **recommended to return the proposal** in present form as the area envisaged for the project is grossly inadequate.

25.11.4 **M/s Shyam Business Solution Pvt. Limited** has again submitted the revised proposal on 11/11/2020 and the same was placed before the EAC in its meeting held on 26/11/2020. The project proponent along with the EIA consultant made a presentation before the Committee.

Observations of the Committee

25.11.5 The Committee noted the following:

- i. The proposal came up for discussion during 23rd EAC meeting and was returned as the land available was insufficient to house the facilities proposed. Revised proposal with half the facilities as given below has now been proposed.

Sl. No.	Parameters	Details
1	Production Capacity & Machineries	Submerged Arc Furnaces: 2x9MVA Ferro-Manganese: 18000 TPA Silico-Manganese: 12000 TPA Sinter Plant: 9000 TPA
2	Power Demand	16 MVA
3	Water Demand	133 KLD (FW: 33 KLD, RW: 100 KLD)
4	Manpower Requirement	128 (Labors: 108, Management: 12)
5	Project Cost	45 Cr

- ii. The project site is located in a severely polluted area.
- iii. Make water 33KLD shall be sourced from DMC.
- iv. 40 % land has been reserved for green belt.
- v. The facility shall produce only FeMn; SiMn and FeSi. No Fe-Cr shall be produced.

Recommendations of the Committee

- 25.11.6 After deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at Annexure-1 read with additional ToRs at Annexure-2:
- i. Only surface Water shall be used. Ground water abstraction shall not be permitted.
 - ii. PM level from chimneys shall be maintained at < 30 mg/Nm³.
 - iii. All Plant roads and approach road to plant shall be made paved and industrial vacuum cleaners shall be used to keep the plant clean and free of fugitive emissions.
 - iv. 100 % of the slag generated through the process shall be utilized.
 - v. Plant shall operate on ZLD.
 - vi. 4th hole extraction system shall be installed on SAF for control of dust emission.
 - vii. Briquetting and Jigging plant shall be installed.
 - viii. No Ferro Chrome production without prior Environment Clearance from MoEF&CC.
 - ix. Action plan for green belt development and rain water harvesting shall be submitted.
- 25.12 Expansion of existing Pellet Plant (1.2 MTPA to 6.0 MTPA) keeping Iron Ore Beneficiation plant 1.5 MTPA, Producer Gas plant (75000 Nm³/hr to 200000 Nm³/hr) with addition of new Wet Grinding unit (4.5 MTPA), Sponge Iron plant (1.8 MTPA), Ferro Alloys Plant (0.036 MTPA) with Chrome briquette & Zigging plant , Steel Melting Shop (1.4 MTPA) with slag crushing unit, Rolling mill with pickling and Galvanising line (3.5 MTPA), Wire Rod & Wire Drawing mill (1.0 MTPA) and CPP 245 MW (120 MW coal and Dolochar Mix Based and 125 MW WHRB based) by **M/s. Rashmi Udyog Private Limited** located at Village Jitusole & Baghmur, P.O.Garhsalboni, P.S- Jhargram, **District Jhargram, West Bengal** - [Online Proposal No. IA/WB/IND/151940/2020, File No. J-11011/180/2012-IA.II.(I)] – **Prescription of Terms of Reference based on the site visit report of the Sub-committee of EAC - regarding.**
- 25.12.1 The salient features of the proposal cited above is given below:

Details submitted by the project proponent

M/s. Rashmi Udyog Private Limited proposes expansion of existing Pellet Plant (1.2 Million TPA to 6.0 Million TPA) keeping Iron Ore Beneficiation plant 1.5 Million TPA, Producer Gas plant (75000 Nm³ /hr to 200000 Nm³ /hr) with addition of new Wet Grinding unit (4.5 Million TPA), Sponge Iron plant (1.8 Million TPA), Ferro Alloys Plant (0.036 Million TPA) with Chrome briquette & Zigging plant , Steel Melting Shop (1.8 Million TPA) with slag crushing unit, Rolling mill with pickling and Galvanising line (3.5 Million TPA), Wire Rod & Wire Drawing mill (1.0 Million TPA) and CPP 245 MW (120 MW coal and Dolochar Mix Based and 125 MW WHRB based)”. It is proposed to manufacture steel from Pellet plant-Sponge Iron-SMS route.

The existing project was accorded environmental clearance vide letter No. J11011/180/2012-IA II (I) dated 22.06.2015 as amended on 04.10.2019 & 28.01.2020.

The project proponent obtained Consent to Establish from West Bengal Pollution Control Board for 1.20 MTPA Pellet Plant, 1.5 MTPA I/O Beneficiation Plant & Producer Gas Plant -75000 Nm³/hr vide NOC No-159435 vide memo No-34-2N-46/2007 (E)- PART-II; dated 17.01.2020 and amendment vide memo No-103-2N-46/2007 (E)- PART-II; dated 27.02.2020.

The proposed unit will be located at Village- Jitusole & Baghmuri, P.O-Garhsalboni, P.SJhargram, District- Jhargram, State- West Bengal.

The land area for EC awarded project is 20.639 hectare (51 acres) and for expansion project additional land required is 36.017 Hectares (89 acres), making it all total 56.656 hectare (140 acres). No forestland involved. Out of the 56.656 hectares (140 acres) of land, 32.375 hectares (80 acres) of land is in possession by M/s Rashmi Udyog Private Limited and for rest of the land mutual agreement obtained from private parties. Of the total area, 18.696 hectares (33 %) land will be used for green belt development.

No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna

Total project cost is approximately 1500 Crore rupees. The existing manpower for the EC awarded project is 169 (69 regular & 100 contractual). Proposed additional employment generation from proposed expansion project will be 1000 direct employment and 2000 indirect employment.

The targeted production capacity of the proposed expansion project is DRI (Sponge Iron) 1800000 TPA, Ferro Alloy (FeMn, SiMn, FeSi & FeCr)-36000 TPA, Chrome Briquette plant-20 TPH; Zigging Plant-90 TPD; Steel Melting Shop with matching LRF/AOD & CCM (Billet/Slab)-1800000 TPA; Slag Crushing unit- 100 TPH; Rolling Mill with Pickling & Galvanising Line-350000 TPA; Wire Rod Mill & Wire Drawing -1400000 TPA, I/O Beneficiation plant- 1500000 TPA, Wet Grinding unit-4500000 TPA, I/O Pellet Plant-6000000 TPA, Producer Gas Plant- 200000 Nm³/hr and Captive Power plant-245 MW [WHRB-125 MW + CFBC (Coal & Dolochar mix based)-2 x 60 MW].

The major raw material which will be handled consists of Iron Ore fines & lumps, Pig Iron, Coal, Coke, Dolomite, Limestone, Manganese Ore, Chromium ore & Quartzite. The raw materials will be purchased from mines located in Orissa, West Bengal, Jharkhand, MP and Chhattisgarh (Iron Ore-Rungta Mines linkage, Pig Iron- Captive unit of Rashmi Group Consent from Orissa Metaliks Pvt. Limited & Rashmi Metaliks Limited & depending upon availability). Non-Coking coal will be imported. The ore transportation will be done through Rail, Road & Ship.

The proposed capacity for different products for new site area as below:

Sl. No	Particulars of Facilities	Existing		Proposed		Ultimate		Product
		Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	
1.	DRI	**	**	900 x 5 TPD	1.8 Million T.P.A	900 x 5 TPD	1.8 Million T.P.A	Sponge Iron
2.	Steel Making Facilities with matching LRF, CCM and oxygen optimized furnace	**	**	(30 T X 8 + 40 T X 2) IF + EAF (1 X 60 T)	1.8 Million T.P.A	(30 T X 8 + 40 T X 2) IF + EAF (1 X 60 T)	1.8 Million T.P.A	Billets, Slab

Sl. No	Particulars of Facilities	Existing		Proposed		Ultimate		Product
		Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	
3.	Slag Crusher	**	**	4 x 25 TPH	100 TPH	4 x 25 TPH	100 TPH	Metal Recovery
4.	Oxygen Plant	**	**	2 x 200 TPD	400 TPD	2 x 200 TPD	400 TPD	Oxygen
5.	Ferro Alloy	**	**	3 x 9 MVA	36,000 TPA	3 x 9 MVA	36,000 TPA	FeMn, SiMn, FeSi & FeCr
6.	Jigging Plant	**	**	3 x 30 TPD	90 TPD	3 x 30 TPD	90 TPD	Metal Recovery
7.	Chrome Briquette Plant	**	**	1 x 20 TPH	20 TPH	1 x 20 TPH	20 TPH	Briquette Plant
8.	Rolling Mill with Pickling Line & Continuous Galvanising Line	**	**	**	0.35 Million T.P.A	**	0.35 Million T.P.A	H.R. Plate , Galvanized Sheets
9.	Wire Rod Mill and Wire drawing	**	**	**	1.4 Million T.P.A	**	1.4 Million T.P.A	TMT Bars, Wire Rod & Wire
10.	Pellet Plant Enhancement of pellet plant capacity	2 x 0.6 Million TPA	1.2 Million T.P.A	2 x 2.0 Million T.P.A	4.0 Million T.P.A	(2 x 1.0 + 2 x 2.0) Million T.P.A	6.0 Million T.P.A	Iron ore Pellet
				2 x 0.6 Million TPA to 2 x 1.0 Million TPA	2.0 Million TPA			
11.	I/O Beneficiation	1 x 1.5 Million TPA	1.5 Million TPA	**	***	1 x 1.5 Million TPA	1.5 Million TPA	Concentrated Iron ore
12.	Wet Grinding Unit	**	**	2 x 2.25 Million T.P.A	4.5 Million T.P.A	2 x 2.25 Million T.P.A	4.5 Million T.P.A	Concentrated Iron ore
13.	Producer Gas Plant	10 x 7,500 Nm ³ /hr	75,000 Nm ³ /hr	10 x 12,500 Nm ³ /hr	1,25,000 Nm ³ /hr	(10 x 7,500 + 10 x 12,500) Nm ³ /hr	2,00,000 Nm ³ /hr	Producer Gas
14.	Captive Power Plant	**	**	WHRB Based 125 MW from DRI Plant + CFBC (Coal Dolochar mix based) 2 x 60 MW	245 MW	WHRB Based 125 MW from DRI Plant + CFBC (Coal Dolochar mix based) 2 x 60 MW	245 MW	Power

The existing connected power demand for EC awarded project is 8.0 MW and the additional electricity load of 312.0 MW will be required for proposed project. Total connected power requirement will be 320.0 MW and is being/ will be procured from Captive Power Plant and WBSEDCL (West Bengal State Electricity Transmission Company Limited). Further the management will have 10 x 720 KVA DG sets to meet the emergency power requirement:

The proposed raw material requirement along with its source and mode of transportation is furnished as below:

Sl. No.	Name of the Raw Materials	Quantity (TPA)			Source	Distance of source from		Up to First Unloading point (RAIL/ PORT)	Plant site	
		Existing for EC awarded Project	Additional for Expansion unit	Total		First Unloading Point (Km)	Project site		Distance from first unloading point (Approx.)	(Mode of Transportation)
1	Iron Ore Fines	15,00,000	49,92,000	51,42,000	Applied for captive iron ore mines	270-300	---	Train up to Jhargram	10.5 KM	By Road SH-5

Sl. No.	Name of the Raw Materials	Quantity (TPA)			Source	Distance of source from		Up to First Unloading point (RAIL/ PORT)	Plant site	
		Existing for EC awarded Project	Additional for Expansion unit	Total		First Unloading Point (Km)	Project site		Distance from first unloading point (Approx.)	(Mode of Transportation)
					Alternate source: Purchased from Barbil-Joda, Orissa			Public Siding		
2	Iron ore Lumps	---	1,00,000	1,00,000				Train up to PFT RML Siding or Nimpura Public Siding	22-30 KM	By Road NH-6
3	High graded Iron Ore	---	3,45,810	3,45,810						
4	Pig Iron	---	2,75,100	2,75,100	From other unit of group company	---	30-200	----	---	By Road NH-6
5	Non-coking coal	1,44,000	26,26,800	27,70,800	CCL, MCL & Imported Coal. Also, applied for captive Coal mines (Jagnathpur-B, (Raniganj Coal field West Bengal), vesting order from MOC, Govt. India obtained.	300-500	---	By vessel up to nearest port (Haldia / Paradeep / Vizag) and followed by train up to Jhargram Public Siding	10.5 KM	By Road SH-5
								By vessel up to nearest port (Haldia / Paradeep / Vizag) and followed by Train up to PFT RML Siding	30 KM	By Road NH-6
6	Coke	---	23,400	23,400	Imported, E-Auction	300	---	By vessel up to nearest port (Haldia / Paradeep / Vizag) and followed by train up to Jhargram Public Siding	10.5 KM	By Road SH-5
								By vessel up to nearest	30 KM	By Road NH-6

Sl. No.	Name of the Raw Materials	Quantity (TPA)			Source	Distance of source from		Up to First Unloading point (RAIL/ PORT)	Plant site	
		Existing for EC awarded Project	Additional for Expansion unit	Total		First Unloading Point (Km)	Project site		Distance from first unloading point (Approx.)	(Mode of Transportation)
7	Dolomite	---	1,23,130	1,23,130	From Birmitrapur, Orissa / Bilaspur, CG	270-350	---	Train up to Jhargram Public Siding	10.5 KM	By Road SH-5
8	Bentonite	40,000	80,000	1,20,000	From Gujarat, Rajasthan	1000	---	Train up to Jhargram Public Siding	10.5 KM	By Road SH-5
9	Limestone	26,000	2,09,060	2,35,060	From Birmitrapur, Orissa / Bilaspur, Raipur CG / Katni MP	270-350	---	Train up to Jhargram Public Siding	10.5 KM	By Road SH-5
10	Manganese ore	---	93,600	93,600	From Balaghat, MP & Orissa	1000	---	Train up to Jhargram Public Siding	10.5 KM	By Road SH-5
11	Chromium Ore	---	79,200	79,200	Orissa, Jharkhand etc.	300	---	Train up to Jhargram Public Siding	10.5 KM	By Road SH-5
12	Quartzite	---	9,000	9,000	From Belpahar Orissa / Bilaspur, Raipur CG	500	---	Train up to PFT RML Siding	30 KM	By Road NH-6
Total (TPA)					93,17,100					

Water Consumption after the proposed expansion will be 320 m³ /hr and no waste water will be generated. The raw water will be sourced mainly from the supply system of Jhargram Municipality (Subarnarekha River), ground water (bore well) and rain water harvesting pond. Domestic waste water will be treated in STP and industrial waste water generated will be treated in ETP and reused in DRI plant, Zigging plant slag granulation plant and also for dust suppression, green belt development & ash handling.

The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

Name of the consultant: M/s. Kalyani Laboratories Private Limited, [S.No. 88, List of ACOs with their Certificate / Extension Letter no. Rev. 4, Nov 10, 2020].

25.12.2 M/s. Rashmi Udyog Private Limited has made application vide online proposal no. IA/WB/IND/151940/2020 dated 16/05/2020 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

25.12.3 The aforesaid proposal was earlier considered in 21st meeting of the Re-constituted EAC (Industry-I) held during 30th July – 1st August, 2020.

Observation of the Committee during meeting held on 30th July – 1st August, 2020

The Committee noted the following:

- i. Plant layout is highly congested. The layout should include facilities around the boundary of the plant including entry and exit gates and also to engineering scale.
- ii. Out of 180 acres of land that is required for the project, only 80 acres of land is in their possession and balance is yet to be acquired.
- iii. 7665 KLD water would be sourced from municipality whereas the water can be drawn from Subarnarekha River.
- iv. Besides, MoEF&CC and SEIAA has accorded following ECs to the Rashmi group companies in the vicinity of the proposed expansion project site.

A. M/s. Rashmi Cement Limited			
(Location- at Mouja-Jitusole (J.L No.-702 & 703), Junglekhas (J.L. No.731) and Baghmundi (J.L. No.928), Village-Jitusole, PS-Jhargram, District Jhargram)			
Sl. No	Name of the Unit	Total Production	
		Configuration	Capacity
1	Enhancement of Existing DRI production by process optimization Product:-Sponge Iron	10 x 100 + 1 x 350 + 4 x 600 TPD	14,90,000 TPA
		Environment Clearance details i. F.No. J-11011/604/2008-IA.II(I) dated 13/02/2009 ii. F.No. J-11011/604/2008-IA.II(I) dated 29/01/2020 Present status: Following units are under operation. <ul style="list-style-type: none"> • DRI (Sponge Iron) 11x 100 TPD + 1 x 350 TPD + 1 x 600 TPD = 8,00,000 MTPA. • SAF (FeMn, FeSi, SiMn & FeCr) 3 x 9 MVA = 36,000 TPA 	

2	SAF (Ferro Alloy Plant) Product:- (FeMn, FeSi, SiMn&FeCr)	8 x 9 MVA	96,000 TPA	<ul style="list-style-type: none"> • Power Plant (WHRB) 43MW = 43MW • Chrome Briquette Plant (1 x 20 TPH) = 480 TPD
3	Zigging plant	6 x 15 TPD	6 x 15 TPD	
4	Chrome Briquette Plant	2 x 40 TPH	2 x 40 TPH	
5	SMS with matching LRF & AOD, CCM Product:- Billets/ Slab	8 x 20 T	5,70,000 TPA	
6	Slag Crusher	2 x 20 TPH	2 x 20 TPH	
7	Hot Rolling Mill Product:- H.R. Plates, Galvanized sheets	--	2,50,000 TPA	
8	Cold Rolling Mill/ Wire Drawing with Pickling Line & Continuous Galvanising Line Product:- TMT Bars, Wire rod & Wire	--	3,00,000 TPA	
9	Captive Power Plant Product: Power	88 MW WHRB based + 1 x 25 MW CFBC (Coal Dolochar based)	113 MW	
B. M/s. Rashmi Cement Limited (Village- Baghmuri, P.O-Garhsalboni, P.S- Jhargram, District Jhargram)				
Expansion of Cement Grinding Plant from 0.18 MTPA to 0.96 MTPA by operating Old Ball Mill-IV (1 x 600 TPD) and adding new 1 x 600 TPD Ball Mill and 1 x 2000 TPD Vertical Rolling Mill base Grinding Units				iii. SEIAA, West Bengal vide File no- 1276/EN/T-III/044/2014 dated 27/05/2015 Present status: The cement grinding unit is under operation.

- v. There are 4 Industries of Rashmi Group within the vicinity of the proposed expansion project site manufacturing Steel and Cement. Instant expansion proposal does not consider integrating them for cumulative EIA study.
- vi. There is no provision of railway siding. The group companies and this proposal would result in minimum 3000 to 5000 TPD material and product movement by road.
- vii. Details regarding mode of inter-transfer movement of material between the group companies exists at the site has not been furnished.

viii. The Committee also taken cognizance of the following issues stated in the public representations dated 26/05/2020, 29/05/2020 and 6/6/2020 of Shri. Bijaya Kumar Mishra, Advocate:

- M/s. Rashmi Udyog Private Limited has commenced the construction of 2x0.6 MTPA pellet plant prior to grant of EC and CTE.
- M/s. Rashmi Udyog Private Limited has installed 1 MTPA pellet plant in place of 0.6 MTPA pellet plant without obtaining prior approvals.
- The group companies of M/s. Rashmi Group at District Jhargram are extracting 960 KLD of ground water without prior permission.
- Land records possessed by the companies may be called for as multiple ECs have been given by MoEF&CC for the same land (or) adjoining land.
- Project proponent has concealed the information regarding commencement of construction of pellet plant at the time of obtaining EC from MoEF&CC

Recommendation of the Committee during meeting held on 30th July – 1st August, 2020

In view of the foregoing and after deliberations, the Committee recommended for a site visit by a subcommittee to ascertain the factual status at the site before considering the instant expansion proposal for grant of ToR.

- 25.12.4 The site visit to M/s. Rashmi Udyog Private Limited (RUPL) & M/s. Rashmi Cement Limited (RCL) which are located adjacent to each other was undertaken on 20/10/2020 by the Sub-Committee and submitted its report to the Ministry on 17/11/2020. The site visit report placed before the EAC in its 25th meeting held on 26/11/2020.
- 25.12.5 The project proponent vide their email dated 24/11/2020 expressed their inability to attend the meeting as their company Director who was supposed to present the case before the EAC is suffering from Covid-19 and under treatment presently. In view of this, PP has requested to consider their proposal in the next EAC meeting.
- 25.12.6 In this regard, the Member Secretary apprised the EAC that as per MoEF&CC Office Memorandum No. 22-35/2020-IA.III dated 18/08/2020 pertaining to “Streamlining the process of grant of Environment Clearance process”, “All projects, placed in the agenda, should be considered by the EAC notwithstanding the non-attendance of the Project Proponent or his consultant in the EAC meeting to make a presentation. A clarification may however be sought from the consultant regarding reason for not attending the meeting”.
- 25.12.7 In response to the above, EAC noted that as per the provisions of the EIA Notification, 2006 which states that “Expert Appraisal Committee concerned in a transparent manner in a proceeding to which the applicant shall be invited for furnishing necessary clarifications in person or through an authorized representative”. In this regard, after deliberations, the EAC is of the considered view that participation of applicant in person (or) authorized representative in the meeting is very much essential due to facilitate the following:
- To conduct the meetings in a transparent manner.
 - To get consent of the project proponent while prescribing the conditions for which the proposal is considered by the EAC.

- To clarify the technical queries/concerns of EAC which might emerge during the appraisal process.

25.12.8 In view of above, the Committee decided to consider the proposal in the presence of PP. However, the Committee discussed upon the findings of the site visit report of the sub-committee and noted following recommendations of the sub-committee:

A. M/s. Rashmi Udyog Private Limited

- i. Physical demarcation of M/s Rashmi Udyog be provided along with clear demarcation between M/s Rashmi Cement Ltd. and M/s Rashmi Udyog Pvt. Ltd units.
- ii. The capacity verification of the pellet plant modules be got done through a third party agency such as MECON to dispel any doubt on the plant capacity as raised in the various complaints and as also the PP has intended to increase the capacity from 1.2 MTPA to 2.0 MTPA.
- iii. The PP be asked to explain as to why the facts regarding signing of the equipment supply agreement by M/s Rashmi Udyog Pvt. Ltd. on 25/10/2019 was suppressed, while obtaining transfer of EC and consent to establish.
- iv. The PP be asked to explain installation of 2 modules of pellet plant each with 0.6 MTPA capacity as against the single module of 1.2 MTPA specified in EC and consent to establish.
- v. The PP be asked to provide details of land transfer carried out or land transfer agreement for all instances of EC transfer from M/s Rashmi Iron Industry Pvt. Ltd. to M/s Rashmi Cement Ltd. and to M/s. Rashmi Udyog Pvt. Ltd.
- vi. The PP be asked to provide high resolution map of the project area for the historical period January 2020 i.e. prior to starting construction at site as stated by PP.
- vii. The PP shall provide details of linkage/MOU signed for procurement of iron ore fines.
- viii. The PP be asked to provide clarification for storage of large quantity iron fines, when the construction of the plant is still ongoing, and the PP has not even applied for Consent to Operate.
- ix. The PP be asked to confirm the ownership of the large pile of stocked iron fines with documentary evidence.
- x. The PP should submit details of energy of energy and water footprint details for the present configuration of production that is 2 module of pellet plant each of 0.6 MTPA capacity and the original configuration of one module of 1.2 MTPA as specified in EC.
- xi. The PP shall submit revised layout of the plant incorporating 2 pellet plants modules of 0.6 MTPA capacity each.
- xii. The total water requirement of the plant shall be met from Jhargram Municipality (River Subarnarekha) and no ground water abstraction will be permitted.
- xiii. The present road connectivity between the national highway and the plant is inadequate to cater even to the present requirement of transporting raw materials, products and waste of M/s Rashmi Cement Ltd and the existing capacity of M/s Rashmi Udyog Pvt. Ltd. Any expansion of capacity of M/s Rashmi Udyog Private Limited, which would necessitate transfer of about 17.5 MTPA of material from the unit alone can be considered subject to availability of dedicated road corridor or railway siding.
- xiv. The internal roads shall be paved with proper drainage system.
- xv. The existing plant layout proposed for expansion in production capacity is congested and needs to be revisited.
- xvi. Land Use pattern of the additional land required for expansion needs to be changed for agricultural to industrial use as cultivation was seen on this land.

- xvii. The unit shall develop green belt as specified in the EC granted by MoEF on 22/6/15.
- xviii. The unit shall install continuous ambient and quality monitoring stations (CAAQMS) as specified in the EC dated 22/6/15
- xix. The gasifier should be closed loop circuit design, proper collection and treatment system shall be in place before commencement of production for tar and phenolic waste generated if any.

B. M/s. Rashmi Cement Limited

- i. The PP should explain for the anomaly in the Environment Clearance granted by MoEF&CC, which is in the name of M/s Rashmi Cement Ltd and the various Consent to Operate granted by WBPCB, in the name of M/s RCL, (Steel & Power) Division II, III and IV.
- ii. The unit has produced 648820 tonnes of material during 2019-20 exceeding the production capacity of 600000 TPA stated in the EC dated 12/02/2009. Reasons for the same shall be explained.
- iii. During March 2020, the unit's production was 77165.47 TPM as against the permitted quantity of 66666.66 TPM considering the permitted production capacity of 800000 TPA as per EC dated 29/01/2020 for which consent to operate was issued by WBPCB on 6/3/2020. Reasons for the same shall be explained.
- iv. The unit be asked to explain its action for continuing commissioning of Ix9 MVA SAF in violation to the EIA notification 2006 since the validity of the EC expired on 11/2/2019.
- v. Physical demarcation of M/s Rashmi Cement Ltd and M/s Rashmi Udyog Pvt Ltd at the site shall be provided.
- vi. The present road connectivity between the national highway and the plant is inadequate to cater to the transportation needs of the unit and that of the group's adjacent unit M/s Rashmi Udyog Pvt. Ltd. The unit shall work for construction of dedicated road/railways siding to cater to its transportation requirement and submit time frame for development of facility.
- vii. Improvement in housekeeping, dedicated raw material and waste storage, yards with provision of storm water runoff control, provision of digital display board at the entrance gate for stack emissions/ AAQ shall be provided.
- viii. The unit shall provide details of the actions taken to ensure compliance of the directions issued by WBPCB dated 15.06.2020.
- ix. Green belt shall be developed all along the boundary wall covering 33% of the plant area. Reasons for non-development of green belt even after lapse of 13 years since grant of EC be explained.
- x. The unit shall install 03 number of continuous ambient air quality monitoring stations (CAAQMS). Reasons for non-installation of CAAQMS even after lapse of 13 years since grant of EC be explained.
- xi. Internal roads should be regularly cleaned, paved wherever unpaved with proper drainage systems.
- xii. The unit shall provide rainwater harvesting and storage facility as specified in the EC within the next one year.
- xiii. The unit shall switch over to surface water for its entire water demand in the next 2 years Jhargram Municipality water source (River Subarnarekha). The Unit shall not extract ground water after 2 years.

- xiv. The unit shall get the CEMS regularly calibrated as specified in the CPCB document, “guidelines for Continuous Emission Monitoring Systems,” and maintain record of the same.
- xv. The unit shall provide complete material balance of the raw materials used, production, categories of waste generated, their mode of disposal along with supporting documents.
- xvi. The unit shall submit action taken note to ensure compliance to the directions issued by WBPCB.
- xvii. The unit shall initiate action to get all the consents to operate consolidated.

C. West Bengal State Pollution Control Board

- (i) The West Bengal Board be asked to clarify, whether any permission has been granted by then to M/s Rashmi Udyog Pvt. Ltd. for storage of Iron Ore Fines.

Observations of the Committee

25.12.9 The Committee noted the following:

- i. The committee accepted the recommendations of site visit report of the sub-committee.
- ii. The committee decided to consider the proposal in the presence of PP.

Recommendations of the Committee

25.12.10 After deliberations, the Committee recommended the following:

- A. Proposal may be listed for consideration in the next EAC meeting for taking appropriate view on the instant proposal as requested by the proponent vide email dated 24/11/2020. Meanwhile, MoEF&CC may seek written response of project proponent on the recommendations of sub-committee with respect to M/s. Rashmi Udyog Private Limited.
- B. The recommendations of sub-committee with respect to M/s. Rashmi Cement Limited may be forwarded to IA-Monitoring Cell for taking appropriate action as it pertains to the post project monitoring i.e., non-compliance of prescribed EC conditions.

25.13 Proposed Clinkerization Plant of 2.7 MTPA capacity along with WHRS of 15 MW capacity **by M/s. ACC Limited** located at Villages: Amehta, Deosari and Mehgaon, Tehsil: Vijayraghavgarh, **District: Katni, Madhya Pradesh** [Online Proposal No. IA/MP/IND/183711/2020, File No. J-11011/175/2008-IA.II(I)] – **Prescribing of Terms of Reference - regarding.**

25.13.1 **M/s. ACC Limited** has made application vide online proposal no. IA/MP/IND/183711/2020 dated 17/11/2020 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(b) Cement plants under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

- 25.13.2 M/s. ACC Limited proposes Clinkerization Plant of 2.7 MTPA capacity along with WHRS of 15 MW capacity at Villages: Amehta, Deosari and Mehgaon, Tehsil: Vijayraghavgarh, District: Katni (Madhya Pradesh). It is proposed to set up the Clinkerization Plant for manufacturing of Clinker based on dry process technology.
- 25.13.3 Earlier, ACC Limited has obtained Environment Clearance for Proposed New Clinkerization Plant (2.7 MTPA), Expansion of Limestone Mine (from 5.445 MTPA to 9.495 MTPA) & Captive Power Plant (from 50 MW to 85 MW), Waste Heat recovery Boiler (10 MW) and new centralized Coal Processing plant with coal washery (0.405 MTPA) at Kymore Cement Works, Tehsil: Vijayraghavgarh, District: Katni (Madhya Pradesh) from MoEFCC, New Delhi *vide* letter no. J-11011/175/2008-IA II (I) dated 24th Nov., 2011; validity extended *vide* letter dated 06th Nov., 2019 (valid upto 23rd Nov., 2021). Consent to Establish has also been obtained for Proposed New Clinkerization Plant (2.7 MTPA) and WHRS (15 MW) from MPPCB *vide* their Consent No. 50882 dated 20th Dec., 2019 (valid up to 31st Oct., 2024). Construction activity has been started at site.
- 25.13.4 PP has reported that the proposed Clinkerization Plant, for which EC has already been obtained from MoEFCC, New Delhi will not be implemented within the validity period of existing granted EC due to the COVID-19 situation. Therefore, the company is now applying afresh for obtaining Environment Clearance of the same project, i.e. Proposed Clinkerization Plant of 2.7 MTPA capacity along with WHRS of 15 MW capacity at Villages: Amehta, Deosari and Mehgaon, Tehsil: Vijayraghavgarh, District: Katni (Madhya Pradesh); so that the construction work at site will not be hampered and project will be executed as planned.
- 25.13.5 The proposed Clinkerization Plant is located at Villages: Amehta, Deosari and Mehgaon, Tehsil: Vijayraghavgarh, District: Katni, State: Madhya Pradesh.
- 25.13.6 The land area for the proposed plant is 72.77 ha and 86% of total area is within the existing captive mining lease area and remaining 14% is outside the mining lease. No forest land is involved. 97.5% of the total land required for the project is under possession of the company and remaining 2.5% is under acquisition which will be acquired shortly. Out of the total plant area, 24.01 ha (33%) will be covered under greenbelt / plantation.
- 25.13.7 No National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Tiger Reserve/ Elephant Reserve, etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.
- 25.13.8 Total project cost is approx. Rs. 1564 Crores. Proposed employment generation from the proposed project will be approx. 400 Persons directly; indirect employment will also be generated for approx. 4000 number of persons.
- 25.13.9 The targeted production capacity of Clinker is 2.7 Million TPA and WHRS is 15 MW. Limestone will be sourced from its own existing captive mines, situated adjacent to the plant site by Belt conveyor. Other raw materials like Iron Ore, Bauxite, Sand Stone and Laterite will be sourced locally (from Katni area, MP, by road).
- 25.13.10 The proposed capacity for different products are as below:

S. No.	Unit	Proposed Capacity
1.	Clinkerization Plant (Million TPA)	2.7
2.	WHRS (MW)	15

25.13.11 Proposed Raw materials required for the project are Limestone; which will be sourced from its own existing captive mining lease, Iron Ore, Bauxite, Sand Stone and Laterite will be sourced from Katni area (Madhya Pradesh). Fuel for Clinkerization Plant will be Coal and Pet coke which will be sourced from Korba & other coal mines and Reliance & others (i.e. indigenous & imported one) respectively.

S. No.	Name of Raw Material	Quantity (Million TPA)	Source	Distance from plant site	Mode of transportation
1.	Limestone*	4.05	Own existing captive Mines	Own existing captive Mines	Belt conveyor
2.	Iron ore	0.0864	Katni (MP)	50-100 km	Road
3.	Bauxite	0.0864	Katni (MP)	50-100 km	Road
4.	Sand stone	0.0432	Katni (MP)	50-100 km	Road
5.	Sand stone	0.09	Katni (MP)	50-100 km	Road

*The limestone requirement for this proposed plant would be met by existing captive mines of Kymore Cement Works for which Environmental clearance is already obtained and valid with an executed mining lease deed.

25.13.12 Total power requirement will be around 43 MW, out of which 15 MW will be sourced from WHRS and remaining 33 MW will be sourced from Grid.

25.13.13 Water Consumption for the proposed project will be 1222 KLD, out of which, fresh water requirement will be 1105 KLD; which will be sourced from Existing sump of the operating mine & water reservoir created at worked out pits of captive limestone mines through rain water harvesting. Domestic Waste water generated will be treated in Modular STP and treated water will be used for greenbelt development / plantation.

25.13.14 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

25.13.15 Name of the consultant: M/s. J.M. EnviroNet Pvt. Ltd. [S.No. 95, List of ACOs with their Certificate / Extension Letter no. Rev. 4, Nov 10, 2020].

Observations of the Committee

25.13.16 The Committee noted the following:

- i. For this proposal, EC was accorded in Nov 2011 and the same is valid till Nov 2021.
- ii. Total land requirement is 72.77 ha and 97.5 % land is in the possession of PP.
- iii. Boundary wall is constructed, railway siding approved and permission for power line obtained.
- iv. 1222KLD water shall be sourced from mine pits. No GW abstraction is envisaged.
- v. PP apprehends that during validity period of EC the project could not be completed, hence this application for fresh TOR.

Recommendations of the Committee

25.13.17 After deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the

generic ToR enclosed at Annexure-1 read with additional ToRs at Annexure-2:

- i. PP shall land use conversion from Competent Authority as 86% of total area is within the existing captive mining lease area.
- ii. No ground water abstraction is permitted.
- iii. PM emission from stacks shall be less than 30 mg/Nm³.
- iv. Action plan for use of alternate fuels in kiln shall be submitted.
- v. Roads inside the plant shall be paved and industrial vacuum cleaners shall be used to clean the plant roads regularly.
- vi. Action plan for rain water harvesting shall be submitted.

25.14 Proposed Zinc Smelter Complex (1x0.35 MTPA Zinc Smelter along with Fumer Plant), 2x90 MW Captive Power Plant and 35 MW WHRB by **M/s. Hindustan Zinc Limited** located at GIDC Doswada, Taluka Songadh, **District-Tapi, Gujarat** [Online Proposal No. IA/GJ/IND/176971/2020, File No. J-11011/288/2020-IA.II(I)] – **Prescribing of Terms of Reference - regarding.**

25.14.1 **M/s. Hindustan Zinc Limited** has made application vide online proposal no. IA/GJ/IND/176971/2020 dated 12/11/2020 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & nonferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

25.14.2 M/s. Hindustan Zinc Limited proposes to install a new Zinc Smelting Plant with proposed capacity of 1x0.35 MPTA of Zinc Smelter along with Fumer Plant, 2X90 MW of captive power plant and 35 MW WHRB at Gujarat Industrial Development Corporation (GIDC) Doswada, Taluka Songadh, District Tapi, Gujarat. It is proposed to adopt hydro-metallurgical smelting process, which is a Roast, Leach and Electro-winning process technology.

25.14.3 The proposed unit will be located at GIDC Doswada, Taluka Songadh, District Tapi, Gujarat.

25.14.4 The land acquired for the proposed plant is 165.60 ha and which falls under GIDC industrial area and is under the possession of HZL. No agriculture and forest land involved. No Rehabilitation & Resettlement (R&R) issues involved. Out of 165.60 ha, 55 ha (33%) will be used for greenbelt/green cover development.

25.14.5 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. within 10 km radius of study area. Further, there is no forest land in the proposed project site. Purna wildlife Sanctuary ESZ is located at distance of 10.7 km, S.

25.14.6 Total project cost is about Rs. 5000 Crores. The expected employment generation from proposed project will be about 3100 persons and 1900 persons during construction and operation phase respectively.

25.14.7 The targeted production capacity of the proposed smelter project will be 0.35 MTPA of Zinc, 2x90 MW (180 MW) of CPP and 35 MW of WHRB.

25.14.8 The proposed capacity for different products are as below:

Name of Unit	No of unit	Capacity of each Unit	Production Capacity
Zinc Smelter	1	0.35 MTPA	0.35 MTPA

Name of Unit	No of unit	Capacity of each Unit	Production Capacity
Captive Power Plant (CPP)	2	90 MW	180 MW
Waste heat Recovery Boiler (WHRB)	3	35 MW	35 MW

25.14.9 The proposed raw material and fuel requirement, source and transportation details are as given below:

Item	Total Quantity/ Year (Tonnes)	Source of Supply		Probable Transportation	
		Imported%	Indigenous%	Imported	India
Zinc Concentrate	7,00,000	100%	-	ship	Rail/Road
Zinc Secondaries (Dross/ Ash/ Other Zinc bearing wastes)	50,000	-	100%	-	Road
Aluminium Metal	1000	-	100 %	-	Road
Coal for Power Plant	15,00,000	70 %	30%	ship	Rail/Road
Coal for Fumer Plant	1,96,000	70 %	30%	ship	Rail/Road

25.14.10 The end products and by-products details are as given below;

PRODUCTS	UOM	QUANTITY
SHG Zinc Cathode/Ingot (Special High Grade)	TPA	3,50,000
Zinc (Continuous Galvanizing Grade)/ Zinc Alloys/ Zinc Compounds (out of 3,50,000 TPA)	TPA	1,00,000
Power (Thermal)	MW	2X90
Power (WHRB)	MW	35
DG Sets (Emergency)	MW	20
BY-PRODUCTS (TPA)		
Sulphuric Acid	TPA	6,64,000
Zinc Oxide Compound	TPA	80,500
Copper as Copper Sulphate/ Chloride/ Matte/ Compound (equivalent metal)	TPA	1,000
Granulated Fumer Slag	TPA	2,10,000
Cadmium Metal / Sponge (equivalent metal)	TPA	1200
Bottom Ash/Fly Ash	TPA	5,10,000
Cobalt as Cobalt oxide/compound (equivalent metal)	TPA	50
Nickel	TPA	30
Germanium	TPA	25
Lead – Silver Compound	TPA	18,900
Calomel	TPA	44
Sodium Sulphate	TPA	3,000
Sodium Chloride	TPA	750

- 25.14.11 The total power requirement for the Smelter Complex is 215 MW, which will be sourced from 2x90 MW coal based Captive Power Plant/GUVNL (GUJARAT Urja Vikas Nigam Limited) and 35 MW Waste Heat Recovery Plant. Further, DG Sets of 20 MW are proposed for emergency back-up power.
- 25.14.12 Water demand for the proposed project will be 46,070 KLD (fresh water is 35,000 KLD + recycled water is 11,070 KLD) and wastewater generated will be 12,300 KLD. The 90 KLD treated domestic wastewater will be used for Horticulture and 10,980 treated industrial wastewater will be reused in the process. The fresh water requirement for the proposed Zinc Smelter Complex is estimated as 35,000 KLD and will be supplied by Gujarat Water Supply and Sewerage Board from Ukai dam through a pipeline. Zero effluent discharge will be maintained, and treated effluent shall also be utilized in the process.
- 25.14.13 The solid waste generation from ETP, purification cake, cooler cake, anode mud, cobalt cake, used oils, waste oils etc. will be stored in designated area for further disposal for alternative uses/landfill site. The fly ash generated from the power plant will be supplied for cement manufacturing. Bottom ash will be supplied to bricks manufacturers. Surplus quantity of bottom ash, if any, shall be disposed in the ash pond.
- 25.14.14 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 25.14.15 Name of the consultant: M/s. Vimta Labs Limited [S.No. 135, List of ACOs with their Certificate / Extension Letter no. Rev. 4, Nov 10, 2020].

Observations of the Committee

- 25.14.16 The Committee noted the following:
- i. Mindhola or Madav River Dam is located at a distance of 0.3 km from the project site.
 - ii. Committee also noted the provisions of siting guidelines pertaining to river flood plain and was of considered view that flood plain of the Madav River Dam should be avoided.
 - iii. Highest Flood, 5 year & 10-year flood discharge along with flood level of the Madav River Dam and its impact on the unit along with its mitigation measures shall be submitted. Spread of 5-year, 10 year and highest flood may be depicted on a map of legible scale.
 - iv. Project specific details have not been quantified in the Form I application uploaded on Parivesh.
 - v. Project lay out shall be revised.

25.14.17 Recommendations of the Committee

In view of the above, the Committee, after detailed deliberations, recommended to return the proposal in its present form.

27th November, 2020

- 25.15 Expansion of Steel Manufacturing Unit for production (24,000 TPA to 96,000 TPA of billets) by adding Induction Furnace, Rolling Mill and Continuous Casting Machine by **M/s Saboo Tor Private Limited** at Trilokpur road, Kala Amb, Tehsil- Nahan, **District: Sirmaur, State: Himachal Pradesh**. [Proposal No. IA/HP/IND/184063/2019; MoEF&CC File No. IA-J-11011/169/2019-IA-II(I)] – **Environment Clearance – regarding**.

- 25.15.1 **M/s. Saboo Tor Private Limited** has made online application vide proposal no. IA/HP/IND/184063/2019 dated 20/11/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “B” of the schedule of the EIA Notification, 2006. However, due to the applicability of general condition i.e., existence of inter-state boundaries within 5km radius of the project site, the project is being appraised at Central Level as Category ‘A’.

Details submitted by the project proponent

- 25.15.2 The detail of the ToR is furnished as below:

Date of application	Consideration	Details	Date of accord
13/03/2019	6 th meeting held on 29 th -30 th of April, 2019	Terms of Reference	20/05/2019

- 25.15.3 The Expansion Project of M/s. Saboo Tor Private Limited is located at Trilokpur road, Kala Amb, Tehsil- Nahan, District: Sirmaur, Himachal Pradesh. The proposal is for Expansion of Steel Manufacturing Unit for production (24000 TPA to 96,000 TPA of billets) by adding Induction Furnace, Rolling Mill and Continuous Casting Machine.

- 25.15.4 The existing project did not require EC as its existing capacity of 24,000 TPA as per MoEF&CC notification S.O. 30367 (E) dated 1/12/2009. Consent to operate was accorded by Himachal Pradesh State Pollution Control Board, Shimla vide consent no.: - HPSPCB/PCB/ID-14132 13804-6 dated 29/08/2018. Validity of CTO is up to 31/03/2021.

- 25.15.5 The proposed expansion will be undertaken in the existing plant located at Trilokpur road, Kala Amb, Tehsil- Nahan, District: Sirmaur, State: Himachal Pradesh.

- 25.15.6 The proposed capacity for different products for new site area as below:

Name of the product	Existing (TPA)	Additional (TPA)	Total (TPA)
Steel Ingots/ Billets	24,000	72,000	96,000
TMT/MS Bars, Angles, Flats, & Rounds	23,200	69,800	93,000

Configuration of Units:

S. No.	Description	Existing	Proposed	After Expansion
i.	Induction Furnace	6.5 TPH	20 TPH	6.5 TPH and 20 TPH
ii.	Rolling Mill	1x 5 TPH	1 x 14 TPH (after modification)	1 x 14 TPH
iii.	Heat Treatment Furnace	01 No.(Will be dismantled after expansion)	--	100% Hot rolling

S. No.	Description	Existing	Proposed	After Expansion
iv.	Concast Machine	---	01 No.	01 No.
v.	D.G. Set	125kVA-01No.	350kVA-01 No.	125kVA-01No. & 350kVA- 01No.

25.15.7 The expansion will be done in the existing having 15,005m² (1.5 acres) of land having land use 'Industrial'. No forest land is involved. The entire land is already under the possession of industry. Of the total area, a minimum of 33% will be used for Green belt development which includes the existing Green belt.

25.15.8 The location lies between 30°30'17.49"N and 30°30'23.34"N Latitude and 77°12'26.54"E and 77°12'32.69"E longitude in Survey of India topo sheet No. H43L/2, H43L/3, H43L/6, H43L/7, at an elevation of 342m AMSL. The ground water table reported to ranges between 2.98 to 37.35 m bgl during the post-monsoon season and 3.76 To 43.98 m bgl during the pre-monsoon season.

25.15.9 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.

25.15.10 The details of the raw material requirement is given as below:

S. No.	Raw Material	Quantity (TPA)	Source	Mode of transport
1.	MS Scrap, Ferro Alloys	1,03,920	From Domestic & as well as International Markets	By road
2.	Steel Ingots and Billets For Rolling	96,000	Own Unit	

25.15.11 The targeted production capacity of the Steel Ingots/Billets after expansion is 96,000 TPA which includes the proposed capacity enhancement of 72,000TPA. The raw material mostly steel scrap and additives will be sourced from local and international market and the transportation will be primarily through road.

25.15.12 Total water consumption for the after the proposed expansion will be 28.1KLD and no waste water will be generated from the process. The water requirement is for cooling purpose. Domestic waste water will be treated through STP. No industrial waste water will be generated. The cooling tower blow down will be reused after adequate treatment.

25.15.13 The electricity load of 3500 KW (3.5MW) for the proposed expansion will be sourced from H.P.S.E.B. and an additional D.G. set of 350KVA will be installed in addition to the existing DG set of 125 KVA.

25.15.14 Baseline Environmental Studies

Period	March, 2019 to May, 2019
AAQ parameters at eight locations	PM ₁₀ - 60.2 µg/m ³ and 88.6 µg/m ³ PM _{2.5} - 20.4 µg/m ³ to 50.8 µg/m ³ SO ₂ - 5.1 µg/m ³ to 12.8µg/m ³

	NOx –16.5 µg/m ³ to 30.2µg/m ³ CO – 0.24 mg/m ³ to 0.45 mg/m ³
AAQ modelling	PM ₁₀ = 0.88239 µg/m ³ SO ₂ = 2.62351 µg/m ³ NOx = 2.36239 µg/m ³
Ground water quality at eight locations	pH - 7.31 to 7.50, Hardness - 225.4 to 239.1 mg/l, TDS – 336 to 406 mg/l.
Surface water quality at five locations	pH - 7.26 to 7.7, Hardness - 138.6 to 150.4 mg/l, TDS - 189 to 221 mg/l BOD - <2 mg
Noise levels at eight locations	50.5 to 68.7 Leq dB (A) for day time and 41.1 to 56.4 Leq dB(A) for night time.

25.15.15 Following is the list of solid and hazardous waste likely to be generated and measures for disposal:

Sl. No.	Waste	Source	Quantity	Disposal
1.	APCD Dust	Induction Furnace	0.04 TPD	Dust from bag filters shall be stored in a dumping pit of R.C.C. and disposed to designated TSDF site
2.	Sludge	STP	6.00 kg/d	The sludge from waste water treatment systems shall be composted and used as manure in horticulture
3.	Cutting Trimming Loss	Rolling Mill	5 TPD	Trimming & Cutting loss will be re-used in I.F
4.	Mill Scales	Rolling Mill	5 TPD	Mill scales are sold in the market
5.	Runner/Rise	Concast	2.0 TPD	Recycled
6.	Furnace Slag	Induction Furnace	14.0 TPD	Slag will be periodically tapped and left to solidify. The slag will be then crushed and iron particles are taken out through the process of magnetic separation. The left-over slag will be supplied to manufacturers of cement concrete blocks, pavers & tiles under proper agreement
7.	Used Oil	DG sets	0.015 KI/A	Sold to authorized recyclers
8.	MSW from every day & Domestic @250gm/PPPD	Employees	37.5 kg/d	Municipal solid waste due to everyday sweeping and domestic activities will be collected in bins

25.15.16 The public hearing was conducted at project site on 27.12.2019 for the proposed expansion in the existing premises located in the revenue estate of Trilokpur Road, Kala Amb, Tehsil-Nahan, District- Sirmour, HP, under the chairmanship of Additional Deputy Commissioner, Sirmour. The issues raised during public hearing are employment opportunity & air

pollution. An amount of Rs. 24.00 Lacs (i.e. 1% of expansion project cost) has been earmarked in order to address the issues raised during public hearing.

25.15.17 Total project cost is approx 39.12 Crore including the existing cost of Rs. 15 Cr. Proposed employment for the project will be 25 persons as direct employment and 150 as indirect employment. Total cost for Environmental Management Plan (EMP) is Rs. 273.0 Lacs.

25.15.18 The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

S.No	Title	Capital Cost Rs. Lakh	Recurring Cost Rs. Lakh
1	Pollution Control during construction stage	5.0	---
2.	Air Pollution Control (Installation of APCD)	100	15.0
3.	Water Pollution Control Measures	30.0	10.0
4.	Noise Pollution Control (Including cost of Landscaping, Green Belt)	8.0	4.0
5.	Solid Waste Management	5.0	2.0
6.	Environment Monitoring and Management	-	10.0
7.	Occupational Health, Safety and Risk Management	5.0	2.0
8.	RWH	10.0	4.0
	Total	163.0	47.0

25.15.19 Green belt will be developed over 33% area of the total plant area. Out of the 1.5 ha of the plant area, about 0.5 ha will be developed as green belt. Indigenous trees with tree density of 2500 trees per hectare with local board leaf species shall be planted.

25.15.20 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

25.15.21 Name of the EIA consultant: M/s. Chandigarh Pollution Testing Laboratory- EIA Division (CPTL-EIA) [S.No. 92, List of ACOs with their Certificate / Extension Letter no. Rev. 4, Nov 10, 2020].

Observations of the Committee

25.15.22 The Committee noted the following:

- i. Certified compliance status of existing CTO conditions from the Himachal Pradesh Pollution Control Board has not been furnished.
- ii. Area for green belt is not enough as per layout. The layout also does not permit uniform green belt all around the plant boundary.
- iii. Plant layout is highly congested. Total land is 1.5 ha. Instant expansion is in multifold nature and all envisaged units maintaining safety norms may not be able to be accommodated in the layout submitted. Further, detailed engineering drawing has not been made available.
- iv. Existing plant area is land locked and there is no proper approach to the site.

- v. Action plan to address the issues raised during public consultation as per the MoEF&CC O.M. No. 22-65/2017-IA.III dated 30/09/2020 has not been submitted.

Recommendations of the Committee

- 25.15.23 In view of the above, the Committee, after detailed deliberations, recommended to return the proposal in its present form.
- 25.16 Proposed alumina refinery of 3.0 MTPA along with co-generation power plant of 150 MW by **M/s. Aditya Aluminum Limited** at Kansarigurha village, Kashipur tehsil, **Rayagada district, Odisha** [Online Proposal No. IA/OR/IND/154572/2020; File No. J-11011/141/2004-IAII(I)] – **Reconsideration for grant of ToR based on ADS reply - regarding.**
- 25.16.1 The salient features of the proposal cited above is given as below:

Details submitted by the project proponent

M/s. Aditya Aluminum Limited, proposes to install a new Alumina Refinery manufacturing unit for production of alumina. It is proposed to set up the plant for production of alumina refinery of 3.0 MTPA along with co-generation power plant of 150 MW based on Bayer's technology.

The project was earlier accorded environmental clearance vide Lr.No J-11011/141/2004/IA.II dated 18.03.2006. However, no activity was initiated at the site and the validity period of the EC was lapsed.

The proposed unit will be located at Village: Kansarigurha, Taluka: Kashipur, District: Rayagada, State: Odisha.

The land area acquired for the proposed plant is 866.232 ha out of which 246.567 ha is an agricultural land, 575.323 ha barren land and 44.342 ha forest land (558.64 ha Private land and 263.25 ha Government Land). 44.342 ha forest land is involved. 560.659 ha of land has been acquired and rest is in process of acquisition for the project. Of the total area 286.22 ha (33 %) land will be used for greenbelt development.

No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. Detailed study of ecological aspects including the Schedule-I, flora and faunal species will be carried out in the environmental base line studies.

Total project cost is approx. Rs. 11,000.00 Crores. Employment generation from the proposed project will be 150 direct and 8,000 indirect employments during construction phase and 750 direct and 4,000 indirect employments during operation phase.

The targeted production capacity of the Plant is 3.0 million TPA. The ore for the plant would be sourced from nearby Kodingamali Bauxite Mines and procurement from other sources. The ore transportation will be done through environmental friendly fully covered closed conveyor.

The proposed capacity for different products for new site area as below:

Name of unit	No. of units	Capacity of each Unit	Production Capacity
Alumina Refinery	3	1 MTPA	3 MTPA
CPP: Cogeneration	5	30 MW	150 MW

The electricity load of 3 MW will be procured from the GRID & Company has also proposed to install 4500 KVA DG Set during construction. The electricity load of 150 MW will be met from CPP during operation.

Proposed raw material and fuel requirement for project are Bauxite ore, Coal, Lime, Caustic Soda and Furnace Oil. Requirement of Bauxite ore will be fulfilled from Kodingamali and nearby other Bauxite Mines, Coal from domestic and imported sources, Lime from domestic sources in Rajasthan & Madhya Pradesh, Caustic Soda from domestic suppliers and imported sources. Fuel consumption will be mainly coal and HFO. HFO will be sourced from domestic oil companies like HPCL & IOCL.

Water Consumption for the proposed project will be 10.41cusecs (25,470 m³/day). 20,000 m³/day during operation and 5,000 m³/day during construction. Wastewater generation will be 10,000 m³ /day. Domestic wastewater will be treated in STP and the treated water will be used for sprinkling & horticulture. Industrial wastewater generated will be recycled and reused fully.

The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

It is reported that the proposal for the township is dropped and M/s UAIL township will be used for this project

Name of the consultant: Name of the EIA consultant: M/s. Vimta Labs Limited [S.No. 135, List of ACOs with their Certificate / Extension Letter no. Rev. 4, Nov 10, 2020].

- 25.16.2 **M/s. Aditya Aluminum Limited** has made application vide online proposal no. IA/OR/IND/154572/2020 dated 29/08/2020 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.
- 25.16.3 The aforesaid proposal was considered in 23rd meeting of the Re-constituted EAC (Industry-I) held during 28-30th September, 2020.

Observations of the Committee during meeting held on 28-30th September, 2020

The Committee noted the following:

- i. Status of the Forest Clearance has not been made available by the PP.
- ii. Alternate site analysis has not been carried out.
- iii. Red mud related issues are not adequately addressed in the pre-feasibility report.
- iv. Justification for earmarking a huge area for ash pond has not been furnished.

Recommendations of the Committee during meeting held on 28-30th September, 2020

After deliberations, the Committee deferred the consideration of the proposal and sought the following additional information:

- i. Status of forest clearance of various patches of forest land totaling 44.342 ha of land within the proposed plant area.
- ii. Description on Alternate site selection.
- iii. R&R Plan and other welfare schemes included in the project.
- iv. Note on use of red mud in time bound manner and accordingly a revised requirement of land red mud pond.
- v. Explanation as to why such a large area is required for fly ash pond while Fly ash Notification calls for 100 % utilization of Fly ash in three years' time.

25.16.4 Project proponent has replied to ADS vide its letter No. HIL/Proposed Aditya Alumina Refinery/Kansarigurha-Odisha/13 dated 19/11/2020 on PARIVESH portal.

25.16.5 The proposal is reconsidered by the Re-constituted EAC (Industry-I) in its 25th meeting held on 25-27th November, 2020. The reply submitted by the project proponent is summarized as below:

i. Status of forest clearance of various patches of forest land totaling 44.342 ha of land within the proposed plant area.

Reply: Hindalco Industries limited had initially applied for Forest Diversion of Aditya Refinery project off-line to PCCF office on 28/11/2006 for 48.53 Ha of land. Hindalco applied for revival of the Refinery project online through Single window clearance to IPICOL, Govt. of Odisha on 27/5/2019 and it has been accorded approval on 20/01/2020 by the HLCA, GOO under the chairmanship of Hon'ble CM of Odisha. In line with the approved terms, PP again applied online on 19/7/2020 for Diversion of Forest land to the extent of 48.53 ha vide application no- No: FP/OR/IND/45465/2020. The FD proposal is with the PCCF-Nodal, Bhubaneswar. In the meantime, PP has completed the geo-referencing work for DGPS survey of forest land relating to Koraput and Rayagada districts. Besides, CA land identification has been completed and DGPS survey is in progress. Pillar posting around the forest areas are in progress. Reply to the EDS raised on 26 May 2020 by PCCF Nodal submission is delayed due to COVID 19 restrictions. As COVID restriction has already been lifted, PP has stated that they are in the process of submission of the EDS after completing the physical site pending work.

Further to TOR presentation on 26th June 2020 and 25th September 2020, once again PP reviewed the entire land use pattern and finally reduced the forest land from 44.343 ha to **38.06** ha. The forest land spreads in 64 plots admeasuring 38.06 ha. over 14 villages in Rayagada district and five villages in Koraput District. Total 10.47 ha forest land have been excluded from Red Mud Pond Area.

ii. Description on Alternate site selection.

Reply: PP has submitted that Alternate site selection was carried out for the Proposed Alumina Refinery Plant during September 1997 by Engineers India Limited (EIL). Three Sites namely Kansarigurha, Kakiriguma and Tikri were examined for the said Alumina

Refinery Project. Kansarigurha area was found suitable. On that basis, the 1 MTPA alumina refinery EC was granted on 18/3/2006 vide letter no F. No. J11011/141/2004 IA.II(I) in Kanshariguda site and further TOR has been granted for 1.5 MTPA Alumina refinery expansion project on 4/10/2013 for the same Kanshariguda Area. Also on that basis, PP had already purchased land of about 1350 acres of land. A copy of the report containing alternate site analysis has been submitted.

iii. R&R Plan and other welfare schemes included in the project.

Reply: PP has reported that 141 nos of DP families in Kansarigurha and Puhundi village of Rayagada district and 122 nos of DP families in Biriguda village of Koraput district were identified for R&R Plan and other welfare schemes. Company has already acquired two patches of land covering 34.72 acres of land at Biriguda and 40.89 of land at Podapadi for making R & R colonies for both Rayagada and Koraput DP families. R & R plan had been approved on 14.11.2007 in the 1st RPDAC meeting. Amenities proposed at RR colony are pucca roads, water supply, drainage, electricity and social infrastructures covering: Community Hall Building, Primary School Building – outside the complex, Primary First - Aid Centre, Worship Place, and Children's Play Ground etc.

PP has further stated that during 3rd RPDAC meeting dated 03.02.2015, it was decided to give Rs.2500.00 amount to DPs for their livelihood and which is in practice till today. Again, PP has assigned the Socio-Economic Impact Assessment (SIA) and Social Impact Management Plan – SIMP study as per latest EC and TOR guidelines. The study is in progress.

iv. Note on use of red mud in time bound manner and accordingly a revised requirement of land red mud pond.

Reply: Red Mud is the process waste which is generated during the extraction of Alumina from Bauxite through Bayer's process. The red mud is generated after red mud separation through clarification by High Rate Decanters followed by mud washing in Deep Cone Washers. Small quantities are generated as descaled material from the process vessels in Pre-disilication, Digestion, High Rate Decanters, Deep Cone Washers, Liquor Causticisation, Caustic Pond, Guard Pond & Sedimentation Chamber of Bauxite Stacking /Reclaiming area. Aditya Alumina shall adopt the state of the art Red Mud Filtration technology where the red mud slurry is passed through the filter unit with specific process to form red mud cake, so that the water content of the red mud gets reduced to around 20-25% (max.) from the 40% level as in the case of HCSD, resulting in the decrease in area requirement for red mud storage.

With the above background & considering the life of the proposed plant as 30 years, the year wise Red Mud generation & Area required for storing the same has been worked out. In view of this, land requirement for Red Mud pond is reduced from 210 ha to 185 ha.

v. Explanation as to why such a large area is required for fly ash pond while Fly ash Notification calls for 100 % utilization of Fly ash in three years' time.

Reply: PP has submitted the following details:

Design details of ash pond for 150 MW co-generation power plant for 30 years

Indigenous Coal to be used with around 45-48 % ash content

Cumulative Year	Fly ash (MT)	UTILIZATION %	Remarks	Bottom (MT)	UTILIZATION %
1	467200	0	Can be stacked at site in Ash pond (840960 Tonnes)	116800	To be stored
2	467200	50		116800	To be stored
3	467200	70		116800	To be stored
4	467200	100		116800	To be stored
5	467200	100		116800	To be stored
6	467200	100		116800	To be stored
7	467200	100		116800	To be stored
8	467200	100		116800	To be stored
9	467200	100		116800	To be stored
10	467200	100		116800	To be stored
11	467200	100		116800	To be stored
12	467200	100		116800	To be stored
13	467200	100		116800	To be stored
14	467200	100		116800	To be stored
15	467200	100		116800	To be stored
16	467200	100		116800	To be stored
17	467200	100		116800	To be stored
18	467200	100		116800	To be stored
19	467200	100		116800	To be stored
20	467200	100		116800	To be stored
21	467200	100		116800	To be stored
22	467200	100		116800	To be stored
23	467200	100		116800	To be stored
24	467200	100		116800	To be stored
25	467200	100		116800	To be stored
26	467200	100		116800	To be stored
27	467200	100		116800	To be stored

Cumulative Year	Fly ash (MT)	UTILIZATION %	Remarks	Bottom (MT)	UTILIZATION %
28	467200	100		116800	To be stored
29	467200	100		116800	To be stored
30	467200	100		116800	To be stored
	140,16,000		8,40,960 (A)	35,04,000(B)	To be stored
Fly ash 840960 ton and bottom ash 35,04,000 ton need to be stored in ash pond. For bottom ash usage challenge remains, while Hindalco is working with IIT, NIT and ABSTC for application.					

After taking all notification consideration. Coal ash range from 45% to 48 % the Company has reduced the land requirement from 116.73 ha to 45 Ha.

Observations of the Committee

25.16.6 The Committee noted the following:

- i. The revised land requirement for the proposed 3MTPA alumina refinery would be 859 ha as per the break up given below:

Area in hectares	Existing	Revised
Core Plant Area	220	220
Ash Pond	63.00	45.00
Red Mud Pond	210	185.00
Water Pipeline Corridor	21.52	21.52
Ash Pond , Red mud Pond and Conveyor Belt Corridor	14.65	14.65
R&R colony	30.60	30.60
Skill Development Centre	20.24	20.24
Green Belt Development (33% of the total area)	286.28	283.75
Misc. Development activities	0.00	39.08
Grand total	866.23	859.84

- ii. All the reply to the ADS points has been addressed satisfactorily except the ash utilization plan which is not in line with requirement of Fly ash notification, 1999 and its subsequent amendments.

Recommendations of the Committee

25.16.7 After deliberations, the Committee recommended for prescribing following specific ToRs to the Project Proponent for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at Annexure-1 read with additional ToRs at Annexure-2:

- i. Only surface Water shall be used. Ground water abstraction shall not be permitted.
- ii. PM level from chimneys shall be maintained at < 30 mg/Nm³ and Power plant emission norms of SO₂ and NO_x less than 100 Mg/Nm³ shall be adhered to.
- iii. All Plant roads and approach road to plant shall be made paved and industrial vacuum cleaners shall be used to keep the plant clean and free of fugitive emissions.
- iv. Time bound action plan for the utilization of Red mud shall be submitted.
- v. Ash utilization plan inline the provisions laid down in fly ash notification, 1999 and its subsequent amendment shall be submitted.
- vi. PP has proposed 20 ha land for skill development center which is appears to be on higher side. PP may like to revisit the area and utilize the excess area for green belt.
- vii. Green belt shall also be around ash and red mud ponds.
- viii. Traffic study shall be carried out inter-alia including existing road details with traffic load, proposed quantum of material to be transported by road with anticipated vehicle details, line source modelling and road strengthening details etc., These details shall be included in the EIA report.
- ix. Scheme for rain water harvesting shall be prepared inter-alia including recharge of ground water and construction of check dams to ensure harvesting of water to the extent abstracted from river Patagarha river (depending upon annual rain fall) and the details shall be included in the EIA report.
- x. Socio-economic survey in the project influence area that is 10 Kms radial coverage from the project site shall be carried out and included as a part of EIA report.
- xi. The list of flora and fauna with its schedule exists in the study area shall duly be authenticated by the Divisional Forest Officer and submitted along with the EIA report.
- xii. Contour survey of the plant site and red mud storage area with drainage pattern shall be undertaken and included in the EIA report.
- xiii. A separate chapter on red mud management inter-alia including red mud pond location, pipeline route, pumping arrangement envisaged, lining arrangement at the bottom of the red mud pond, leachate collection system and its monitoring etc., shall be prepared and included in the EIA report.
- xiv. Risk assessment, safety and surveillance system to be adopted in the red mud pond shall be included in the EIA report.

25.17 Integrated Steel Plant (6.0 MTPA) and captive power plant of 1080 MW by **M/s. Jindal Steel and Power Limited** at village Kerjang, **district Angul in Odisha** - [Online Proposal No. IA/181960/2020, File No. IA-J-11011/365/2006-IA-II(I)] – **Amendment in Environment Clearance with respect to extension of time frame for installation of Coke Dry Quenching from 31/12/2020 to June 2022 – reg.**

25.17.1 **M/s. Jindal Steel and Power Limited** has made online application vide proposal no. IA/181960/2020 dated 04/11/2020 along with Form 4 and sought amendment in Environment Clearance accorded by the Ministry vide letter no. J-11011/385/2006-IA.II(I) dated 22/02/2007. The amendment sought is with respect to extension of time frame for installation of Coke Dry Quenching from 31/12/2020 to June 2022.

Details submitted by the project proponent

- 25.17.2 M/s. Jindal Steel and Power Limited was granted Environment Clearance by the Ministry a project titled “Integrated Steel Plant (6.0 MTPA) and Captive Power Plant (1,080 MW) located at Kerjang, District Angul, Orissa” vide letter No. J-11011/365/2006-IA-II(I) dated 22/02/2007 and subsequent amendments dated 14/11/2008, 08/02/2017, 26/06/2018 and 22/01/2019.
- 25.17.3 The Ministry while granting EC amendment dated 26.06.2018, stipulated the following additional conditions at SI. No. 15:
- “(ii) Use of wet quenching system in coke oven batteries shall be permitted up to 31st December, 2020.*
- “(iii) Wet quenching to be kept as standby for emergency operation and also to be used during the annual shutdown for CDQ boiler.”*
- 25.17.4 The company had earlier applied to MoEF&CC, New Delhi on 18.03.2020 with a request for extension in time for installation of CDQ by further 18 months i.e. June, 2022. The proposal was discussed by the EAC (Industry-1) in its 17th meeting held on 09.04.2020. Subsequently, MOEFCC vide its letter dated 12.05.2020 communicated the following:
- “the committee noted that the progress made by the project proponent for installation of Coke Dry Quenching (CDQ) in the Coke Oven Plant is not convincing and no tangible effort has been taken by the Project proponent till date for installation of CDQ by 31.12.2020. In view of this, the committee recommended to return the proposal in present form and requested the PP to make a fresh application during November, 2020 along with the report explicitly indicated the tangible actions taken for installation of CDQ in the Coke oven plant.”*
- 25.17.5 In view of above, a fresh application is made for amendment in EC w.r.t. extension in time to install Coke Dry Quenching (CDQ) for Coke Oven Plant at Integrated Steel Plant (6.0 MTPA) and captive power plant of 1080 MW. The amendment is only for increasing the extension in time to install CDQ and allow usage of wet quenching system in coke oven batteries up to June, 2022. Due to outbreak of the COVID-19 pandemic and ensuing lockdown has led to the unexpected delay in the implementation of the CDQ project at Angul. PP has further submitted that there will be no change in the capacity/ configuration of any unit as approved in the EC and its subsequent amendments.
- 25.17.6 PP has submitted the following progress made w.r.t. installation of CDQ:
- Contract has been awarded to M/s Acre Coking & Refractory Engineering Consulting Corporation, China on 30th July 2019. LC for Engineering & equipment for CDQ is established in favour of M/s ACRE against which delivery of Engg. and equipment are in progress. CDQ system will be implemented in two phases i.e. CDQ1 and CDQ2.
 - The equipment ordering for long lead items as well as Medium lead items, which are in JSPL scope of supply, has been placed.
 - Primary and secondary dust catchers have been received at site. Structure of boilers is in transit.
 - Boilers are under manufacturing and expected to be shipped in December, 2020.
 - Site civil works and structural erection is under progress.

25.17.7 Project Proponent has further submitted the Planning schedule w.r.t. installation of CDQ:

S No.	Activity	Target date -CDQ 1	Target date- CDQ 2
1.	Engineering	October 2020	October 2020 for common areas; by June 2021 for specific
2.	Civil &structure	June 2021	December 2021
3.	Equipment erection	September 2021	March 2022
4.	Electrical Erection	October 2021	April 2022
5.	Cold	November 2021	May 2022
6.	Hot Commissioning	December 2021	June 2022

25.17.8 The proponent has mentioned that there is no court case or violation under EIAs Notification to the project or related activity.

Observations of the Committee

25.17.9 The Committee noted the following:

- i. The Committee noted that the steps towards the installation of CDQ in Coke oven taken by PP.
- ii. The CDQ installation can be completed in a time frame less than 12 months, if planned adequately.

Recommendations of the Committee

25.17.10 In view of above and after deliberations, the Committee recommended that extension of time for installation of CDQ may be given for another 12 months i.e., till 31/12/2021. Further, the Committee also recommended that no further extension of time shall be granted to the project proponent in this regard, if the proponent fails to install CDQ by December, 2021, they shall be liable to pay environment compensation for the damages caused due to non-installation of CDQ since grant of EC.

25.18 The Committee drew the attention of each project proponent, during the course of his/her presentation, the communication of MoEF&CC vide email dated 24/11/2020 through PARIVESH regarding the handling of instances of fraudulent calls/communication. Each PP was advised to take action accordingly.

ANNEXURE –1

GENERIC TERMS OF REFERENCE (ToR) IN RESPECT OF INDUSTRY SECTOR

1. Executive Summary
2. Introduction
 - i. Details of the EIA Consultant including NABET accreditation
 - ii. Information about the project proponent
 - iii. Importance and benefits of the project
3. Project Description
 - i. Cost of project and time of completion.
 - ii. Products with capacities for the proposed project.
 - iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
 - iv. List of raw materials required and their source along with mode of transportation.
 - v. Other chemicals and materials required with quantities and storage capacities
 - vi. Details of Emission, effluents, hazardous waste generation and their management.
 - vii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)
 - viii. The project proponent shall furnish the requisite documents from the competent authority in support of drawl of ground water and surface water and supply of electricity.
 - ix. Process description along with major equipment and machineries, process flow sheet (Quantitative) from raw material to products to be provided
 - x. Hazard identification and details of proposed safety systems.
 - xi. Expansion/modernization proposals:
 - a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MoEF&CC/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment, Forest and Climate Change as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB/PCC shall be attached with the EIA-EMP report.
 - b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.
4. Site Details
 - i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.

- ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places)
- iii. Co-ordinates (lat-long) of all four corners of the site.
- iv. Google map-Earth downloaded of the project site.
- v. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.
- vi. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.
- vii. Landuse break-up of total land of the project site (identified and acquired), government/private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)
- viii. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area
- ix. Geological features and Geo-hydrological status of the study area shall be included.
- x. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects)
- xi. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.
- xii. R&R details in respect of land in line with state Government policy.

5. **Forest and wildlife related issues (if applicable):**

- i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable).
- ii. Land use map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (*in case of projects involving forest land more than 40 ha*).
- iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.
- iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon.
- v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area.
- vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife.

6. Environmental Status

- i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
- ii. AAQ data (except monsoon) at 8 locations for PM₁₀, PM_{2.5}, SO₂, NO_x, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
- iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQPM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
- iv. Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
- v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC.
- vi. Ground water monitoring at minimum at 8 locations shall be included.
- vii. Noise levels monitoring at 8 locations within the study area.
- viii. Soil Characteristic as per CPCB guidelines.
- ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
- x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
- xi. Socio-economic status of the study area.

7. Impact Assessment and Environment Management Plan

- i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.
- ii. Water Quality modelling – in case, if the effluent is proposed to be discharged in to the local drain, then Water Quality Modelling study should be conducted for the drain water taking into consideration the upstream and downstream quality of water of the drain.
- iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.
- iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme

of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.

- v. Details of stack emission and action plan for control of emissions to meet standards.
 - vi. Measures for fugitive emission control
 - vii. Details of hazardous waste generation and their storage, utilization and disposal. Copies of MOU regarding utilization of solid and hazardous waste shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
 - viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.
 - ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.
 - x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.
 - xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.
 - xii. Action plan for post-project environmental monitoring shall be submitted.
 - xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.
8. **Occupational health**
- i. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
 - ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre-designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre-placement and periodical examinations give the details of the same. Details regarding last month analysed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
 - iii. Annual report of health status of workers with special reference to Occupational Health and Safety.
 - iv. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.
9. **Corporate Environment Policy**
- i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.

- ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
 - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
 - iv. Does the company have system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report
10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
 11. To address the Public Hearing issues, provisions contained under Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 30/09/2020 shall be complied.
 12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.
 13. A tabular chart with index for point wise compliance of above ToRs.
 14. The ToRs prescribed shall be valid for a period of three years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material in Regional languages shall be provided.
- iv. The letter/application for environmental clearance shall quote the MOEF&CC file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report
- vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MOEF&CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry shall also be followed.
- viii. The consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. Name of the Consultant and the Accreditation details shall be posted on the EIA-EMP Report as well as on the cover of the Hard Copy of the Presentation material for EC presentation.
- ix. ToRs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the project in addition to all the relevant information

as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The Public Hearing shall be chaired by an Officer not below the rank of Additional District Magistrate. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in a separate chapter and summarised in a tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

ANNEXURE-2

ADDITIONAL TORS FOR INTEGRATED STEEL PLANT

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
3. For Large ISPs, a 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. MRL details of project site and RL of nearby sources of water shall be indicated.
4. Recent land-use map based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
5. PM (PM₁₀ and P_{2.5}) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM₁₀ to be carried over.
6. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
7. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
8. Plan for slag utilization
9. Plan for utilization of energy in off gases (coke oven, blast furnace)
10. System of coke quenching adopted with justification.
11. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
12. Trace metals in waste material especially slag.
13. Trace metals in water
14. Details of proposed layout clearly demarcating various units within the plant.
15. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs and outputs (material and energy balance).
16. Details on design and manufacturing process for all the units.
17. Details on environmentally sound technologies for recycling of hazardous materials, as per CPCB Guidelines, may be mentioned in case of handling scrap and other recycled materials.
18. Details on requirement of energy and water along with its source and authorization from the concerned department. Location of water intake and outfall points (with coordinates).
19. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
20. Details on toxic content (TCLP), composition and end use of slag.

ADDITIONAL ToRS FOR PELLETT PLANT

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
3. Recent land-use map based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
4. PM(PM₁₀ and P_{2.5}) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM₁₀ to be carried over.
5. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
6. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
7. Plan for slag utilization
8. Plan for utilization of energy in off gases (coke oven, blast furnace)
9. System of coke quenching adopted with justification.
10. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
11. Trace metals in waste material especially slag.
12. Trace metals in water

ADDITIONAL ToRs FOR CEMENT INDUSTRY

1. Limestone and coal linkage documents along with the status of environmental clearance of limestone and coal mines
2. Quantum of production of coal and limestone from coal & limestone mines and the projects they cater to;
3. Present land use shall be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
4. If the raw materials used have trace elements, an environment management plan shall also be included.
5. Plan for the implementation of the recommendations made for the cement plants in the CREP guidelines must be prepared.
6. Energy consumption per ton of clinker and cement grinding
7. Provision of waste heat recovery boiler
8. Arrangement for co-processing of hazardous waste in cement plant.
9. Trace metals in waste material especially slag.

ADDITIONAL ToRs FOR PULP AND PAPER INDUSTRY

- i. A note on pulp washing system capable of handling wood pulp shall be included.
- ii. Manufacturing process details for the existing and proposed plant shall be included. Chapter on Pulping & Bleaching shall include: no black liquor spillage in the area of pulp mill; no use of elemental chlorine for bleaching in mill; installation of hypo preparation plant; no use of potcher washing and use of counter current or horizontal belt washers. Chapter on Chemical Recovery shall include: no spillage of foam in chemical recovery plant, no discharge of foul condensate generated from MEE directly to ETP; control of suspended particulate matter emissions from the stack of fluidized bed recovery boiler and ESP in lime kiln
- iii. Studies shall be conducted and a chapter shall be included to show that Soda pulping process can be employed for *Eucalyptus/Casuarina* to produce low kappa (bleachable) grade of pulp.
- iv. Commitment that only elemental Chlorine-free technology will be used for the manufacture of paper and existing plant without chemical recovery plant will be closed within 2 years of issue of environment clearance.
- v. A commitment that no extra chlorine base bleaching chemicals (more than being used now) will be employed and AOX will remain within limits as per CREP for used based mills. Plan for reduction of water consumption.

ADDITIONAL ToRs FOR LEATHER/SKIN/HIDE PROCESSING INDUSTRY

1. Justification for engaging a particular type of process (raw hide/skin into semi finishing or finished leather, semi-finished leather to finished leather, dry finishing operations, chrome/vegetable tanning, *etc.*).
2. Details regarding complete leather/ skin/ hide processing including the usage of sulphides, nitrogen compounds, chromium or other tanning agents, post-tanning chemicals, biocides, *etc.*, along with the material balance shall be provided.
3. In case of chrome tanning, details of the chrome recovery plant, management of shavings/solid waste including safe disposal.
4. Details on reuse of soak liquor / saline stream from membrane system, if applicable, to the extent possible in pickling activity after required treatment. Also, mention the salt recovery measures.

ADDITIONAL ToRs FOR COKE OVEN PLANT

1. Justification for selecting recovery/non-recovery (beehive) type batteries with the proposed unit size.
2. Details of proposed layout clearly demarcating various facilities such as coal storages, coke making, by-product recovery area, *etc* within the plant.
3. Details of coke oven plant (recovery/non-recovery type) including coal handling, coke oven battery operations, coke handling and preparation.
4. Scheme for coal changing, charging emission centre, Coke quenching technology, pushing emission control.
5. Scheme for coke oven effluent treatment plant details including scheme for meeting cyanide standard.

ADDITIONAL ToRs FOR ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS

1. Type of the project – new/expansion/modernization
2. Type of fibres used (Asbestos and others) and preference of selection from techno-environmental angle should be furnished
3. As asbestos is used in several products and as the level of precautions differ from milling to usage in cement products, friction products gasketing, textiles and also differ with the process used, it is necessary to give process description and reasons for the choice for selection of process
4. Technology adopted, flow chart, process description and layout marking areas of potential environmental impacts
5. National standards and codes of practice in the use of asbestos particular to the industry should be furnished
6. In case of newly introduced technology, it should include the consequences of any failure of equipment/ technology and the product on environmental status.
7. In case of expansion project asbestos fibre to be measured at slack emission and work zone area, besides base line air quality.
8. In case of green field project asbestos fibre to be measured at ambient air.

ADDITIONAL ToRs FOR METALLURGICAL INDUSTRY (FERROUS AND NON-FERROUS)

1. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs & outputs (material and energy balance).
2. Emission from sulphuric acid plant and sulphur muck management.
3. Details on installation of Continuous Emission Monitoring System with recording with proper calibration system
4. Details on toxic metals including fluoride emissions
5. Details on stack height.
6. Details on ash disposal and management
7. Complete process flow diagram describing process of lead/zinc/copper/ aluminium, etc.
8. Details on smelting, thermal refining, melting, slag fuming, and Waelz kiln operation
9. Details on Holding and de-gassing of molten metal from primary and secondary aluminium, materials pre-treatment, and from melting and smelting of secondary aluminium
10. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
11. Trace metals in waste material especially slag.
12. Plan for trace metal recovery
13. Trace metals in water

Executive Summary

Executive summary of the report in about 8-10 pages incorporating the following:

- i. Project name and location (Village, Dist, State, Industrial Estate (if applicable))
- ii. Products and capacities. If expansion proposal, then existing products with capacities and reference to earlier EC.
- iii. Requirement of land, raw material, water, power, fuel, with source of supply (Quantitative)
- iv. Process description in brief, specifically indicating the gaseous emission, liquid effluent and solid and hazardous wastes. Materials balance shall be presented.
- v. Measures for mitigating the impact on the environment and mode of discharge or disposal.
- vi. Capital cost of the project, estimated time of completion
- vii. Site selected for the project – Nature of land – Agricultural (single/double crop), barren, Govt/private land, status of its acquisition, nearby (in 2-3 km.) water body, population, within 10km other industries, forest, eco-sensitive zones, accessibility, (note – in case of industrial estate this information may not be necessary)
- viii. Baseline environmental data – air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population
- ix. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.
- x. Likely impact of the project on air, water, land, flora-fauna and nearby population
- xi. Emergency preparedness plan in case of natural or in plant emergencies
- xii. Issues raised during public hearing (if applicable) and response given
- xiii. CSR plan with proposed expenditure.
- xiv. Occupational Health Measures
- xv. Post project monitoring plan
